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ABSTRACT

The National Conference on Health Occupations Education was organized in response to a nationwide demand for dissemination of project findings and instructional materials in the field of health education. Emphasis throughout the research project and the conference was on the total instructional process. Approximately 100 participants contributed their knowledge and expertise on teacher education, examined current practices in preservice and inservice teacher training, and recommended new approaches for health occupations education teacher education programs throughout the country. Recommendations generated by the conference participants provide a basis on which guidelines for criteria relating to health occupations teacher education may be developed. (Author/VA)

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health occupations education

(VT-102-200)

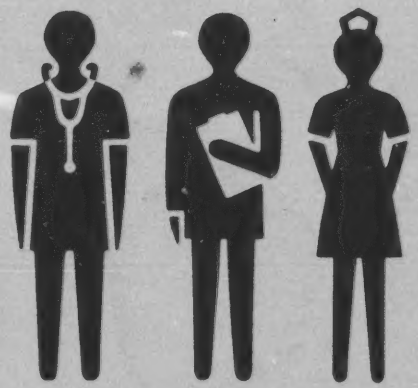
NATIONAL INVITATIONAL CONFERENCE:
Determining the Future Directions for the Development of Efficient and Effective Teacher Education Programs

HOLIDAY INN WEST
OKLAHOMA CITY, OKLAHOMA
FEBRUARY 25 — MARCH 1, 1974

Presented by
UNIVERSITY OF CALIFORNIA
DIVISION OF VOCATIONAL EDUCATION
ALLIED HEALTH PROFESSIONS PROJECT

In cooperation with
U.S. OFFICE OF EDUCATION
CALIFORNIA STATE DEPARTMENT OF EDUCATION
OKLAHOMA STATE DEPARTMENT OF EDUCATION
OKLAHOMA REGENTS FOR HIGHER EDUCATION
OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
AMERICAN VOCATIONAL ASSOCIATION
AMERICAN ASSOCIATION OF COMMUNITY & JUNIOR COLLEGES
LEAGUE FOR INNOVATION IN COMMUNITY COLLEGES

CE 005 362



introduction

INTRODUCTION

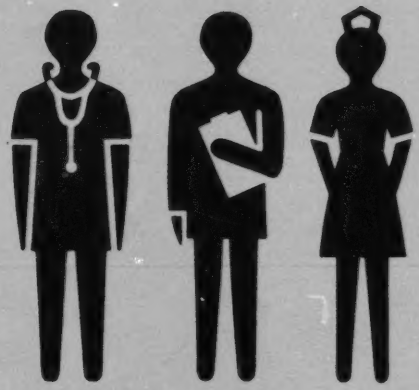
The National Conference on Health Occupations Education, conducted by the Allied Health Professions Project, Division of Vocational Education, University of California, Los Angeles, was organized in response to a nationwide demand for dissemination of project findings and instructional materials in the field of health education. This working conference was held at Oklahoma City during the week of February 25 — March 5, 1974. The information acquired by participants fulfilled the demand for an assessment of teacher education in the health occupations today, and the findings of the conference will be helpful in determining future directions for State Departments of Education and universities in developing and implementing appropriate, effective teacher training in this field.

Emphasis throughout the research project and the conference was on the total instructional process. Approximately 100 participants contributed their knowledge and expertise on teacher education, examined current practices in preservice and inservice teacher training, and recommended new approaches for Health Occupations Education teacher education programs throughout the country.

This report, therefore, represents the considered judgment of many people. Recommendations generated by the conference provide a basis upon which guidelines for criteria relating to Health Occupations Education teacher education may be developed. Dissemination of the knowledge produced by the Allied Health Professions Project will be further expanded with the distribution of this final conference report.

M. L. Barlow

Melvin L. Barlow
Conference Director
University of California, Los Angeles



acknowledgments

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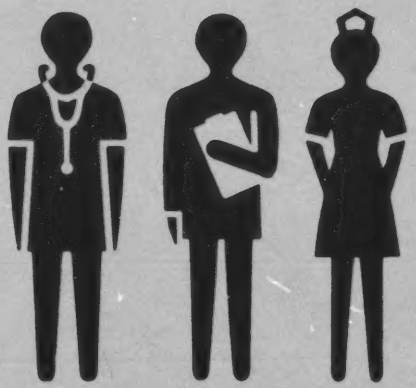

conference agenda

FEBRUARY 25, 1974
MONDAY

5:00 p.m. REGISTRATION

7:00 p.m. CONFERENCE OPENING

INTRODUCTION OF OFFICIALS AND HONORED GUESTS
Melvin L. Barlow

GOVERNOR'S WELCOMING ADDRESS
Honorable David Hall, Introduced by Francis B. Tuttle, State Director, Oklahoma State Department of Vocational Technical Education

Adjournment

■

FEBRUARY 26, 1974
TUESDAY

8:30 a.m. CONFERENCE SCHEDULE AND INSTRUCTIONS
Melvin L. Barlow

9:30 a.m. **PROBLEM AREAS IN THE ALLIED HEALTH FIELD AND WHAT NEEDS TO BE DONE TO PROMOTE SUCCESS**
Lowell A. Burkett, Executive Director
American Vocational Association (Keynote Speaker)

11:00 a.m. Audience/Speaker Interaction

12:00 noon Lunch (no-host)

1:30 p.m. **THE UCLA ALLIED HEALTH PROFESSIONS PROJECT: PURPOSES, METHODS, RESULTS**
Thomas L. Freeland

3:30 p.m. **THE CLINICAL INSTRUCTOR TRAINING PROGRAM**
Miles H. Anderson

4:00 p.m. Audience/Speaker Interaction

Adjournment

■

FEBRUARY 27, 1974
WEDNESDAY

9:00 a.m. **CAREER MODEL DEVELOPMENT**
Lucile A. Wood

11:00 a.m. **A MODEL CURRICULUM: THE NURSING PROGRAM**
Lucile A. Wood

11:30 a.m. Audience/Speaker Interaction

12:00 noon Lunch (no-host)

1:30 p.m. **THE COOPERATIVE RELATIONSHIP BETWEEN THE SOUTH DAKOTA STATEWIDE CORE CURRICULUM PROJECT AND THE UCLA ALLIED HEALTH PROFESSIONS PROJECT**
Donald G. Brekke

2:00 p.m. RESULTS AND BENEFITS OF THE TWO UCLA-SOUTH DAKOTA CORE CURRICULUM WORKSHOPS
Donald G. Brekke
Thomas L. Freeland
Lucile A. Wood

4:00 p.m. Audience/Speaker Interaction

Adjournment

■

FEBRUARY 28, 1974
THURSDAY

8:30 a.m. HEALTH OCCUPATIONS TEACHER EDUCATION: INTRODUCTION OF DISCUSSION TOPICS
Melvin L. Barlow, Group Moderator

10:00 a.m. GROUP DISCUSSIONS — PHASE I

Group 1 — Teacher Selection Criteria
Mary Elizabeth Milliken

Group 2 — Content for the Health Occupations Education Basic Teaching Degree
Robert M. Tomlinson

FEBRUARY 28, 1974
THURSDAY
(continued)

Group 3 — Preparation for Leadership Roles in Health Occupations Education
Elizabeth E. Kerr

Group 4 — Certification Standards for Personnel in Health Occupations Education
Chester S. Rzonca

12:00 noon SPECIAL LUNCHEON IN HONOR OF HELEN K. POWERS
Introduction by Melvin L. Barlow

MY HOPES AND FEARS FOR HEALTH OCCUPATIONS EDUCATION
Helen K. Powers,
Consultant, Health Occupations Education
U.S. Office of Education (Retired)

2:30 p.m. GROUP DISCUSSIONS — PHASE II

Group 1 — Teacher Selection Criteria
Mary Elizabeth Milliken

Group 2 — Content for the Health Occupations Education Basic Teaching Degree
Robert M. Tomlinson

Group 3 — Preparation for Leadership Roles in Health Occupations Education
Elizabeth E. Kerr

Group 4 — Certification Standards for Personnel in Health Occupations Education
Chester S. Rzonca

4:30 p.m. EVALUATIVE IMPRESSIONS OF THE GROUP DISCUSSIONS BY THE "ROVING EVALUATOR"
Clarence Fielstra

Adjournment

■

MARCH 1
FRIDAY

8:30 a.m. **HOW TO GET A NEW HEALTH OCCUPATIONS EDUCATION PROGRAM STARTED**
Ellen M. Abbott

9:00 a.m. **THE UCLA SECONDARY SCHOOLS PILOT AND DEMONSTRATION PROJECT FOR AN INTRODUCTION TO ALLIED HEALTH CAREERS**
Diane E. Watson

10:30 a.m. **EVALUATION OF THE UCLA SECONDARY SCHOOLS PILOT AND DEMONSTRATION PROJECT**
Clarence Fielstra

11:00 a.m. Audience/Speaker Interaction

11:30 a.m. SUMMARY AND CLOSING OF THE CONFERENCE
Melvin L. Barlow

Adjournment

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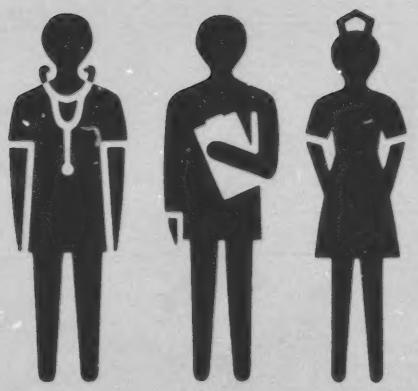

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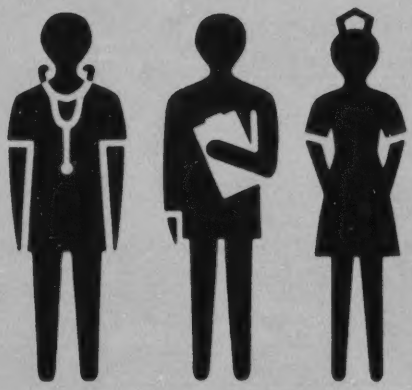

presentations

GOVERNOR'S WELCOMING ADDRESS

Honorable David Hall, Governor, State of Oklahoma

You are all professionals. You are the people who are going to teach us how America can deliver health care—whether national health insurance comes or not, whether the care is public or private, you are going to have to lead the way. The doctors, lawyers, Senators, Representatives, and Governors are all so busy that no one seems able to come up with answers to health care problems, so you who are taking the time as you are today are going to have to provide the answers for 1975 and beyond.

About two years ago I had a chance to go to the Soviet Union with seven other Governors. One of the main objectives of the visit was to view the health care delivery system there. I found a system that was very inadequate above the early level compared to ours. But I also saw a system that designed paramedical activities which I thought were superior to ours in many ways. There was not, for example, a village or an apartment complex we saw that did not have paramedical personnel assigned to take care of the daily problems—the incidentals—that doctors and more highly trained people object to so much in their daily care routine. And there was a very warm, friendly attitude among these paramedical people and those they served, which is a good lesson for us. This is an area we need to take a harder look at because there are thousands of young men and women who would be extremely good as paramedics if they knew about and were inspired to search out the vocation. The need today is more critical than ever.

In Oklahoma, our Health/Science Center is now a three part activity: 1) the educational activity from the University of Oklahoma which trains doctors; 2) the University hospital which provides indigent care and a training center for doctors; and 3) Children's Memorial Hospital. That triangle is providing, we think, some of the best health care facilities in the world. Our main thrust has been aimed at educating doctors and their professional assistants in the allied health occupations.

But I don't think we have given enough attention to the paramedical personnel and I think we are going to have to give this area more of our concern. I hope perhaps in this conference some of the guidelines that you develop and some of the leadership shown by Dr. Barlow and others will give us a method by which we can determine the proper direction to take.

I think it is important that our Vocational—Technical education be expanded. Vocational education is a brand new dimension for Oklahoma young people, many of whom never intended to go to college but they were ill-equipped after finishing high school to compete in a progressively industrialized society—more progressive today than it has ever been. Twenty thousand new vocational titles will go into the books by 1980. The change that goes on every year in our system is almost unbelievable.

Vo-Tech in Oklahoma is "where it's at." You can see thousands of satisfied young people becoming economically independent and that

is a tremendous incentive. (I really envy them because they are going into the labor market making twice what I made as a beginning lawyer when I left law school and went out on my own.) The 9,000 secondary students and the 1,070 adults we serve in Vo-Tech are testimony to the excellent activity that can take place. One of the most innovative programs we have is one where we have taken people of lower mentality who cannot cope with the complicated and frustrating mechanisms of our industrial society and trained them in occupations from domestic help to janitorial help. They are professionals. They receive a certificate just like everyone else, and they take pride in what they do. Those people were considered a loss to society in many cases prior to this time.

There was a news media report in Oklahoma that said we have 400 surplus doctors in this state. Well, I want to tell you something. I wish all those 400 would call me up because I could sure tell them where we need them. We are really about 600 doctors short in the rural areas just as you are in every one of your states.

It is amazing how the locale of a small town produces some of the strongest people in the world. How are we going to induce these people to move back into their rural areas? In Oklahoma, we took a step in this direction in 1971. We decided that we would urge industry to go to the rural areas and not to come to the cities. The result is that 83 percent of the new factories in the last 36 months have been located outside of Oklahoma City and Tulsa. Thirty-seven of our counties have gained population in the last 36 months. The reason is that the young person of today has a different dream than you and I had when we started out. I can remember my friends saying, "I want to leave the country. I want to go to the city, and I want to get the biggest house and the biggest car I can and tell everybody that I'm a success." The young person today says, "I want to move out of the city, I want to go to the country, and I want to enjoy my family and the environment." Well, if we are going to provide that environment, and if we are going to have a meaningful, total life situation, we are going to have to provide health care closer than 50 miles (that's what it averages in many of our rural communities for a round trip to see a doctor).

We *can* provide that care, and I am convinced that education is the golden problem solver of the twentieth century. Now, some of the corporations and two of the main leading daily newspapers in Oklahoma did not believe that because they never paid state tax before I became governor; and they have not let me forget that fact for 36 months. But, do you know what that tax money did? It helped us lead the nation in the reduction of welfare last year. We decreased welfare rolls 11.4 percent and led the 50 states in the number of recipients taken off our welfare rolls in 1973. The reason was not because we were prosecuting offenders or hiring more case workers; the reason was that we educated those welfare recipients so that they could gain the dignity they wanted. That is really the secret. I find that 98 percent of the people on welfare don't want to be there any more than we want to support them. But we do have a duty to support the blind, disabled, deaf, elderly, and fatherless. They deserve our help and they are going to get it.

It is up to us to inspire young people to enter careers in health occupations by letting them know the tremendous scope available and the tremendous satisfaction derived from providing health care. One of the terrible things about working in an industrialized society is the intangible accomplishment factor that you get from doing just one motion in the making of a product. How can you satisfy that urge to create? But, when you provide care for sick people so that eventually their sickness is cured or their life is made better, you experience a tangible reward. An old Chinese philosopher said that, "If you would plan for one year, plant rice. If you would plan for ten years, plant trees. But if you would plan for a hundred years, educate men." That is the answer. And that is why America will continue to lead the world as long as we all believe in education.

PROBLEM AREAS IN THE ALLIED HEALTH FIELD AND WHAT NEEDS TO BE DONE TO PROMOTE SUCCESS

Lowell A. Burkett, M.S.

Vocational education is my life, and I'm very proud of that fact. Vocational education is something that has proven itself for many years, and it is benefitting thousands and thousands of young people in this country. I get very upset at people who try to find new terms to describe the field. The new descriptions just cause confusion, and, besides, I think the idea that the term "Vocational Education" presents a bad image is being overplayed at this point in time.

Vocational education is here to stay. It is not something that is a passing word; it is not just a passing idea. It was started, of course, in prehistoric days and has gradually become more and more important to the welfare of man because of its function in preparing people for employment. I recall that when I first came to Washington it was almost impossible to get anyone to talk about vocational education and about the preparation of people for work through the educational system. We would have to go out and drum up business in terms of what we did to promote vocational education. But that is not true today. There are more people interested in vocational education than ever before; everybody is concerned about it.

Vocational education is becoming more important as time goes on for the simple reason that the labor force of this country is becoming much more technical. By 1980, according to the Department of Labor, 83 percent of the work force of the nation will be in occupations that do not require a baccalaureate degree. That means that we in the field of vocational education are going to be preparing at least 83 percent of the nation's work force! We do not expect to do it all in the public school system; there are going to be other places where this preparation will occur. But, certainly the methods of training people will come from vocational education, and that places considerable responsibility on our shoulders.

The leadership in vocational education is emerging on practically every front. As I travel about the country and talk with people in education and in many other fields as well, I continuously hear the names of people who are having an impact on manpower needs in education. Dr. Barlow and other vocational education leaders are often mentioned. We can be proud of the leadership that we have exerted. There is a need, of course, to continue in that role and we should be working at leadership training more as time goes on.

The American Vocational Association and the organizations that preceded it have been instrumental in keeping the quotas of manpower training in the public schools. We continuously work at this job. The Association has not been insensitive to manpower needs. In 1936, the USOE started programs in practical nurse training, and then the AVA began to see the need for manpower training in that area. The AVA also worked very diligently and effectively in the passage of the Health Amendments Act of 1956. In July, 1969, the AVA added a new division of Health Occupations for the specific purpose of developing a higher degree of professionalism among the health educators in

vocational education. This division of the AVA, although still small, represents almost 2,000 vocational educators who are making a tremendous contribution to the total manpower efforts and to the American Vocational Association.

Although our interest started with the practical nurse field, it then expanded to the total Allied Health Occupations which cover a vast number of jobs in the health fields. There is no question about the extensive opportunities for the development of vocational education in the Allied Health field. Indeed, there are currently programs at all levels.

We were particularly interested in a number of special projects including the Allied Health Professions Project at UCLA and the study by the National League for Nursing which contributed solutions to the problem of an open curriculum in nursing. The project under discussion here (the AHPP) has perhaps contributed more to the Health Occupations field of education than anything we have observed for some time. But there are two major problems connected with any project of this type. One is the dissemination of the findings. This conference will be helpful in solving that problem, but the findings have to be carried to others outside of this particular group. Another problem that we have with a project of this type is getting the ideas implemented. Although the ideas are good and research has been fruitful over the years, many of the results have gone on the shelf and have not been implemented. We have had the Educational Resources Information Center (ERIC) which, for vocational education, was located at The Ohio State University and which has been very helpful to educators and researchers, but it has not been accessible to practitioners.

In preparation for this conference, I reviewed the past activities of the Health Occupations Division of the AVA in order to see what their concerns were. I looked at many of the reports of the policy committees and the various seminars and activities in which they were engaged to see if there was anything unique that you would be interested in. But, as I examined these activities I found they correspond to the concerns of many occupational fields. I would like to take a few moments to talk about some of these concerns and to give you some of my thoughts and interpretations of them as they relate nationally to the problems facing us in our field.

One of the problems with which we are faced is the fact that vocational education occurs at all levels of education and at practically every age of a person's life. In contrast, our public school system has become very compartmentalized. There is elementary education, secondary education, post-secondary education, and then there is continuing education. But people cannot be compartmentalized nor can their experiences. The whole problem of articulation in vocational education has become overwhelming because people approach and leave vocational education at various periods in their school experiences. They want to get into the training program from the education program, but articulation between the two systems sometimes does not exist.

This lack of articulation has become a serious problem that is created primarily by state laws. I had a member of my staff do a study recently. He looked at five selected states in the United States to determine if there is anything in the state laws or policies that is impeding the progress of vocational education. It is interesting to note what the study revealed. There is no relationship in many of these states between what is occurring in the secondary schools and in the post-secondary schools. In some cases there are two different administrative bodies concerned with setting policy. In the Federal Vocational Education Acts, funds are allocated to the State Board of Vocational Education. However, many states have dissipated that concept in their interpretations of the Federal law. Sometimes the State Board of Vocational Education is the

same as the State Board of Education. They will meet for a whole day on General Education problems and spend only five minutes on Vocational Education. Seldom does the State Board of Education relate to the Board of Higher Education. So you can see that the articulation between elementary, secondary, and higher education is a very serious problem as it relates to vocational education.

The Congress of the United States is going to start taking a look at the current Vocational Education Act of 1968. I have already been notified to be prepared because there will be hearings this year and possibly the enactment of new legislation. I am of the opinion that how well we are articulating the program at the state and local levels is going to be one of the major concerns. Congress is getting reports from the post-secondary institutions that the State Board is not giving them the right amount of money or that they are not being treated fairly. In other states the opposite complaint is voiced—that the post-secondary program is controlling the funds and the secondary schools are not getting enough. This is a serious problem, and I think the Congress of the United States is going to take a very close look at this area. I do not know how they are going to resolve it because, after all, it is up to the states to determine how they are going to spend the money. But I think it is something that we as a professional group are going to have to try to resolve. Much of this situation is to be resolved at the state and local level; it can't be done by Federal law.

Another of the problem areas identified and discussed by Health Occupations specialists over the years is the question of comprehensive planning. The 1968 Vocational Education Act called for state plans for vocational education. But this Act has been interpreted to meet the requirements of the law, not to plan for operational purposes. We need to get the planning straightened out to address two elements. First are the needs of the people, specifically the kind of education they need. And second, we have to relate those needs to the manpower needs because you should not train people without providing employment or else the training is of little value. The task of amending the Federal Acts is a job that you are going to have to accomplish at whatever level you are functioning, either state or local. There is a tendency in the planning process to plan in accordance with the resources that we are going to receive so that at the end of the year we can say, "Oh, yes, we did achieve our goal." It is almost impossible for me in my role to relate to Congress what the needs actually are because you say your needs are not greater than the resources you have available. This is a serious problem. We are going to have to look at the needs of the people in terms of training and manpower, and this is a difficult job. It means that you are going to have to think, not in terms of what staff and facilities you have so that you can utilize those effectively, but you are going to have to say that there are this many people who need servicing and these are the manpower needs and we are going to try to meet them.

I think there is going to be monitoring of the planning process in the new Federal legislation. We talk about giving responsibility to local and state people to implement their programs, but if the job is not done we can expect Federal regulations and Federal monitoring. The state plans are going to have to be much more comprehensive and monitored very carefully. I believe Congress is going to take a lot of that job on themselves. That is the reason Congress is not holding hearings on a specific vocational education act being introduced this year. Instead, they are saying, "We really want to monitor. We want to see how well you have done with what you already have been given."

Another problem that we are faced with is "Career Mobility," or the ability of people to move from one part of the country to another and continue to utilize the training and education they possess in an effective manner. Why

is this becoming a serious problem? There are essentially two reasons. One is that our training has been rather specific for any given community. The second reason is that state licensing laws have been so out of order they have not really been concerned with the training of people who move from one location to another. In other words, they are trying to protect that field, that occupation, in that given state. Our licensing laws are archaic; they are going to have to be rewritten. The public needs the protection of licensing laws, but the present laws need revision in order to provide for the mobility of people from one state to another.

We must also be concerned with the whole question of teacher preparation. This is another very serious problem with which we are faced in this country. The first thing we must do is get the right kind of people into the teaching profession in order to strengthen our educational programs across the board. In addition, those who are in the field should receive continuous in-service training. We should help them improve their techniques and encourage them to up-date their knowledge of their technical fields.

All our instructional materials need up-dating. I am delighted with what has been done in this area. Health Occupations Education is ahead of many of the vocational fields and particularly the specialized occupations in this respect. But it is not good enough to print this new material today and not come back two or three years from now to up-date it. The UCLA project should undergo continuous pertinent revisions. We cannot afford to be outdated in our curriculum and our instructional materials. We ought to be looking down the road to what kind of occupations the young people are going to be entering tomorrow. I know we have occupational analysis that tells us what is needed at a given point in time, but we ought to be doing some research and making projections for the future. I have seen in some classrooms the teaching of technical matters that have gone out of existence completely. We cannot justify that kind of mistake in vocational education. It is said that there is a twenty-year lag between education and reality. Vocational education should make an effort to close that gap.

A problem common to all vocational fields is the matter of teacher certification. State certification boards cause trouble in practically every state. There needs to be certification; we should not let just anybody teach. But this problem ought to be looked at realistically to determine what kind of teacher is desired and what kind of certification he needs. This is something that should be taken care of within the states because certification is a state responsibility; there is nothing that can be done with Federal regulations. But it is a process that has to be worked at constantly. Remember that you have to contend with a great deal in the Allied Health field because you are involved in occupations that effect the health and welfare of the public.

Accreditation, which can be defined as the process of a profession policing itself, now confronts the Health Occupations. No government agency is supposed to be involved in this process; it is a profession setting its own minimum standards for a good program. In general, the accrediting agencies, particularly the regional accrediting agencies, have said, "We want to look at the institution to see whether it has the qualities needed to conduct a good educational program—how many books in its library, what kind of degrees it has for teachers, and what the budget is for this institution."

I have been on accrediting teams in the public school system. We never really looked to see what was going on inside the classrooms. Some of us got pretty upset about this procedure and we called upon the National Commission of Accrediting. We went to the Office of Education and said, "You've got institutions out there condoning very poor programs of

vocational technical education. Now what are you going to do about that?" And they said, "Well, we can't visit every classroom in the institutions. That is just an impossible task." I believe that any visiting team going to an institution should take a few moments to look for some of the very essential characteristics of a good program. It would not take much time to do that.

As a result of pressuring them, we got a grant from the Office of Education and authorization to conduct a study of what we thought were essential characteristics for a quality program. The results of that study have gone through some field testing and are currently being utilized by a number of schools for self-study purposes. (We have some copies of that study in our office and we can make them available to anyone who is interested.) But, some of those findings still need to be verified. A lot of research probably needs to go on, but at least we are beginning to really examine the accreditation process, the quality of programs, and other essential characteristics. And that has to happen; otherwise accreditation is valueless. The public will get fed up with accreditation unless the National Commission does begin to discuss quality programs of education.

One of the things for which we are continuously being called upon is evaluation. How well are we doing? Once we set objectives for ourselves, we must determine how well we have met those objectives. One of the best evaluation techniques is merely to follow up on our education. That is, are people getting jobs? Are they performing on the job? Are they happy with their jobs? I would be satisfied with that form of evaluation. And to all these fancy evaluation techniques available, we can say, "Well, if we've got time we'll apply those." The public is looking at that, too. It is demanding some kind of an evaluation because the people are unhappy with the education program. The kind of evaluation the public is placing upon vocational education concerns how well we are preparing people for the jobs they have to perform in the world of work. Is the money the taxpayers are spending getting its return? That is the question they are asking. The one thing that is going to save us is the fact that we *can* prepare people to get jobs, they stay on the job, and they are performing well on the job.

There are other problems that are similar for all fields, particularly this whole question of career ladders. How do you build a curriculum so that people can get back into the work system at various times in their lives and then return later to the educational system for training to take a different job? Vocational education has been saddled with a term that is hurting the program. In the early days we talked about vocational education as being terminal; that word cannot exist in our vocabulary. We have to think of vocational education as the development of an individual which lets him spin off whenever he so desires or move to the next career ladder. And I don't mean a move for higher prestige. This is one of the things that has hurt vocational education—the fact that people have placed a value system on various jobs in our society so that it is down-grading to be a nurse's aide, for instance, instead of being an RN. A nurse's aide, if she is happy performing her job should have just as much prestige as would an RN. We in vocational education have to be the change agents to alter public attitudes. We are a small number of people so we have to work hard at this task.

Identifying research needs and their application is another area of concern. Last week I spent a day and a half with the National Institute for Education on Resource Work examining their program in Career Education. Generally, researchers like to choose their own topics for investigation. But I contend that we practitioners in the field need to identify some really crucial issues for these researchers to get into because they are missing a lot of important needs that should be researched. They are not even paying any attention to them. They are not practitioners, in

general, and they do not have the background that practitioners have. So we should help determine what those research needs are.

The last of the areas I will speak about is the need for collaboration—working together. My job is, first, to try to get all the vocational people to work together so that we have a coordinated, planned program. Second, we have to work in education across the board, and then with all of our professional groups. We cannot serve the people unless we all work together. At the moment we are having overwhelming problems with Federal agencies. I know of one city in the United States that has 28 Federal, state, and local programs all with the same objectives and aimed at the same clientele. Our professional groups are going to find themselves in the same predicament as they recognize their needs and try to develop programs unless they collaborate. We have a long way to go in dealing with all the issues confronting us.

THE UCLA ALLIED HEALTH PROFESSIONS PROJECT: PURPOSES, METHODS, RESULTS

Thomas L. Freeland, Ph.D.

The Allied Health Professions Project, a curriculum research and development project in the allied health occupations, began operations in August, 1968. It was originally funded as a four-year grant under the aegis of the University of California, Los Angeles Division of Vocational Education. The basic objective of the project was to create curricula and instructional materials for those allied health functions that can appropriately be taught in programs through the associate degree level.

The establishment of the project reflected an increasing awareness of the shortage of personnel required to meet the fast-growing demand for health care services. Regardless of the statistics cited, health administrators everywhere can attest to the severity of the manpower shortage, and to the need for large numbers of allied health personnel to extend the services of the highly trained professionals.

The growth and expansion of allied health has been precipitated by: 1) the declaration by the 89th Congress that access to health care is a basic human right of every citizen in the United States of America; 2) rapid change and numerous technological advances which have occurred in the health industry; 3) increase in population, along with a greater number of the aged in the population; 4) availability of prepaid insurance plans to a greater percentage of the population; and 5) an increased awareness of the general population about health and health-related activities. Other factors which resulted in the creation of the Allied Health Professions Project were the rapid proliferation of health specialties and the lack of a functional definition and differentiation between and among many of the allied health occupations.

The Allied Health Professions Project was the result of a U.S. Office of Education grant. The grantee institution was the University of California, Los Angeles. At the time of the award in 1968, it was the first consolidated research effort, funded by the Office of Education, in which many of the health occupations could be simultaneously investigated. The availability of the UCLA Survey Research Center and the UCLA Training Hospital were of prime importance in UCLA being awarded the grant.

The Allied Health Professions Project defines "allied health" as encompassing all health-related occupations (professions). We are very much in agreement with Darrel J. Mase when he says, "The scope of allied health in the broadest use of the term covers all professional, technical, and supportive workers in patient care, public health, and health research as well as personnel engaged in environmental health activities."

The basic philosophy of the project may be summarized as follows:

> The aim is to develop instructional material which will enable the student, after a successful period of study, to perform a skill or a series of skills. Correct performance of the task (job/activity) will enable the student to have sufficient marketable

skills for legitimate remunerative employment. The basic strategy for the development of appropriate instructional materials is to use the job as a benchmark for deciding what skills/tasks/activities will be taught. The criterion of acceptable performance is dependent upon standards of the local agency; however, the Allied Health Professions Project has and will continue to suggest minimum performance standards.

As indicated previously, the primary goal was to develop modern and effective curricula and instructional materials appropriate for training personnel up to and including the Associate of Arts degree. A secondary goal was to provide for continuous updating of these materials and to provide a mechanism for nationwide distribution. Stated more specifically, the objectives of the project were: 1) to develop curricula in health-related fields using modern educational methods; 2) to develop instructional materials on a modular basis; 3) to investigate the concept of core curricula; 4) to develop an allied health occupations career lattice; 5) to provide and distribute, by public or private means, the instructional materials developed by the project.

The basic project methodology may be summarized as follows. After extensive field and library research, the resultant information is reviewed by a national technical advisory committee in order to form a task list of all identifiable activities and functions for a given occupation. Data about each of the tasks are obtained by way of a national survey of health care personnel.

The data are analyzed and published in an occupational analysis report. Using the results of this report, a curriculum outline is formulated, and from this outline a design of the instructional unit is developed. This design includes the rationale, the overall teaching strategy, specifications of behavioral objectives, and division of the units into modules of instruction. For each module in the unit, a teaching draft is developed and field tested. On the basis of the field tests, revisions are made. Instructional materials are then produced and distributed. Material is reviewed and critiqued by members of the national technical advisory committee at each step in their development. Each curriculum is oriented to the concept of career education. Each course or set of courses provides the foundation on which additional competencies can be based. The curriculum has been designed on an open-entry, open-exit plan thereby enabling students to obtain sets of employable skills.

The purpose of sequencing the instructional materials into sets of job skills is to provide the student with marketable skills which will enable him to be gainfully employed. Each stage of the career sequence is based on the skills and knowledge of the preceding stage. The total curriculum then consists of a continuum of skills and knowledge.

The curriculum for any given occupation consists of a series of courses. Because the curriculum is oriented to career education, the learning experiences for all health personnel who perform a given set of procedures are included. By selection of appropriate courses, a custom-made curriculum can be constructed.

The sequence of modules, units, and courses is based on sets of marketable job skills. A suggested sequence for those health occupations for which curricula have been developed is presented in the teacher's manual of the instructional material.

However, this sequence may be altered or revised to match local job market conditions and manpower pool requirements. The primary consideration is to provide sets of job skills which will lead to gainful employment and permit each individual to expand his competency to whatever stage he may select, while minimizing the repetition of previous course content.

The Allied Health Professions Project's developmental system is made up of four basic steps, each of which has one or more substeps within it. The first step is to formulate a task inventory. The second is to produce an occupational analysis report based on a survey of job functions. The next step is to develop instructional materials on a modular basis if required.

Within this third step are five substeps or phases: pre-planning, planning your structural module, producing your prototype instructional module, evaluating the instructional module, and revising the instructional module. The fourth step is to reproduce the product and make it available for distribution.

This is a broad overview of the developmental system which we utilized, at least in theory, at the Allied Health Professions Project. This developmental system was a product of the clinical services group. The original flow chart was developed by Dr. David Ainsworth who was our technical consultant in instructional methodology and media preparation. I would like to review each of the steps in more detail.

The compilation of the task inventory is the first step in developing instructional materials at the Allied Health Professions Project. The task list is in essence a laundry list of all tasks which may be performed in a functional area. A functional area may comprise one or more occupational titles.

For example, nursing is a functional area which consists of several related occupational titles. Inhalation therapy or respiratory care is a functional area which is comprised of at least three titles: the inhalation therapy aide, the inhalation therapy technician, and the inhalation therapist. An example of a functional area which has only a single occupational title would be that of the gastroenterology assistant.

In compiling a task inventory, two substeps are performed almost simultaneously. First, the individual analyst performs the necessary field research in order to catalog existing inventories and existing information pertaining to the functional area under consideration. At the same time, a national technical advisory committee (NTAC) is selected to guide and assist in the development of instructional material and preliminary analysis.

The NTAC is composed of experts in the field—educators and practitioners. The purpose of the NTAC is to define and qualify the need for instructional research, assist in reviewing that instructional material which is available, recommend revisions in existing materials and resources, and assist in identifying critical areas of need.

The next step is to generate an initial task list. Incidentally, a task is a piece of work which needs to be done. Synonyms for task include activity, skill, and job. In formulating an initial task list, the specificity of tasks should be similar within various subsections of the task list. That is to say, if the task is stated in fairly broad terms, such as "make a bed," then all tasks within that specific subsection should be stated with the same degree of specificity. In other words, it would be inappropriate to have one task, "make a bed," in the same grouping with another task such as "make an occupied bed containing an orthopedic patient who is in traction." At the same time, in formulating the initial task list, the precision for stating the task should be dependent on the criticality of correct performance. The more critical the nature of the task, the more precisely the task should be identified.

Again, using our example of making a bed, if the task is thought not to be too critical, the task description "making a bed" may be sufficient. However, if the task is critical, then the precision of statement should be "making a closed bed" or "making an occupied bed which contains a patient who is in traction."

The initial task list is generated along the lines of inclusion. The principle of inclusion assures

that *all* tasks, no matter how remote in any given functional area, will be included in the initial task list. Sources for the initial task list include field research, expert opinion, site visits, job descriptions, and existing procedure manuals.

The next step is for the NTAC to add new tasks, cull outdated tasks, and, if necessary, segment the task list into sets or sections of related skills. This procedure has been used on a national scale. However, it may also be used on a local or regional basis.

The next step within the developmental system is to verify the task list. This verification step may be performed by way of a survey questionnaire or some other occupational study mechanism. In selecting a method for validating the task list, two critical questions must be answered: 1) What is the cost of such data? and 2) What is the usefulness of such data?

In consideration of cost and utility factors, the Allied Health Professions Project elected to develop a self-administered survey questionnaire. The primary intent of the questionnaire was to develop a frequency, difficulty, and supervision index for each of the listed tasks. In conjunction with this numerical data, appropriate demographic and background-influenced respondent information was obtained.

Because of cost factors (approximately $15 per questionnaire), a selected hospital sample was obtained. The hospital panel constituted a judgmental sample. All cooperating institutions were JCHA approved and participated in Medicare. In addition, they were willing to participate in a survey activity of the project.

The administrators or directors of each hospital were personally contacted and oriented to the project, its purposes, and its methodology. A system to distribute and return questionnaires was developed in cooperation with hospital personnel at each of the facilities.

Individual survey respondents were randomly selected to participate in the survey procedures. Surveys were individually returned to the UCLA Survey Research Center, where they were collated, coded, and assigned a security number.

On the completion of the data-gathering phase of the occupational analysis, the data were analyzed electronically by way of several programs. For the most part, the data were reduced to frequency distributions which were used to formulate job matrices. On completion of the data analysis phase, the results were screened by the NTAC to determine reasonableness of the findings, and to assess the criticality and difficulty for specific tasks. After consideration and screening by the NTAC, an occupational analysis report was prepared.

The occupational analysis reports have been used nationwide for 1) developing new instructional materials, 2) writing new job descriptions, 3) re-organizing working departments, 4) justifying salary increases, and 5) defining work responsibilities.

The next major operation is that of developing instructional materials. The instructional material development subsystem is comprised of five steps or phases. Phase one is pre-planning.

In pre-planning instructional materials or modules, the intent is to obtain definitive answers to two simple questions: 1) Is there a training need? and 2) Is the skill suited for mediated (indirect) instruction? Information pertaining to the first question is collected from several sources: the NTAC, occupational analysis, literature research, field research (which includes both interviews and observations), and research of manpower projections.

If it appears that a sufficient number of personnel are being trained to perform a given task or group of tasks, then and only then do

project personnel explore the feasibility of developing instructional materials.

In answering the second question, several kinds of information are required such as: How much instructor interface is required? What is the extent or possibility for self-evaluation performance checks to be utilized? Is the content adaptable to mediated instruction? If these questions are answered affirmatively, we then go on to the next step of planning an instructional module. Prior to discussing this process, I would like to define a module and then discuss the advantages of programmed learning.

A module is a self-contained segment of instruction. It teaches a task which has a beginning and a definitive end—a task which enables one to gain useful employment. The primary advantage of developing instructional content in modules is the great flexibility which this system permits. Many health workers perform the same tasks. By selecting instructional modules which are task-oriented, an individual can receive specific and appropriate training for his job function, regardless of his functional title.

There has been much research in the area of programmed instruction and individualized learning in the last several years. It is not our purpose to debate the pros and cons of programmed instruction. However, I would like to point out that the Allied Health Professions Project prefers to use the term "programmed learning" in place of the more popular term "programmed instruction." We believe that the term "programmed instruction" eliminates the teacher from the teaching-learning process, whereas the term "programmed learning" redefines the teacher's role. In a programmed learning system, the teacher is no longer a traffic cop responsible for the regulation of learning, but rather becomes a resource individual and a learning motivator.

In this way, each individual student can achieve according to his capabilities and his motivation. It was the considered opinion of the project's staff that individualized instruction would enable each student to progress to his own level. The ability to perform a given task or set of tasks should be the learning criterion, *not* the time required to assimilate the required knowledge and skills.

The next phase of developing material is planning the module. Within this phase there are three distinct steps. Step one is setting the limits of student performance. This requires the writer/author to: 1) define the prerequisite behaviors and characteristics of the student population; 2) develop a prerequisite test; 3) check for a match or a mismatch between the prerequisite behaviors and the prerequisite criteria (performance objectives); 5) develop performance tests; and 6) check for a match-mismatch between performance objectives and performance tests.

The definition of student characteristics and prerequisite test items should establish the lower limits for student acceptance in the teaching-learning process. The definition of behavioral objectives (performance objectives) and performance tests should establish the minimal acceptable standards for performance of any job/task/activity.

The next subprocess is that of selecting the media of instruction. In determining the most effective method for presenting the instructional information, one should assess the characteristics of the student population. In other words, one must identify their reading ability, the nature of the material which is to be taught, the kinds and types of student responses desired, and determine the relative cost benefits of various methods of presenting the instructional material. This information should enable one to select the most appropriate media for presentation and at the same time prevent excessive cost expenditures.

The last step within this phase is that of defining the learning environment. The learning environment should be defined in terms of

the supervisory characteristics required by the nature of the tasks and instructional material being utilized, the space requirements per student, and the equipment requirements per student. This information should enable one to predict the size and type of learning facilities required for the teaching-learning process for any given module.

The next phase within the subsystem of developing instructional materials is that of producing the prototype module. Producing the module is subdivided into two sets of operations: 1) producing the instructional content of the module, and 2) devising a control system for the module.

In developing the instructional module the first step is to develop a step-by-step outline of instructional content. This step-by-step outline is usually developed by way of a job operations breakdown. The job operations breakdown (JOB) is a modification of the job instructor technique developed by Dr. Miles Anderson. The center of the JOB is the task or activity to be taught. The task was selected for analysis based on information obtained via the occupational analysis, i.e., frequency of performance.

The process went something like this. Based on the assumption that correct task *performance* was of prime concern, the task and the knowledge and skills required for acceptable performance became the center point of attention. Information *directly* related to task performance is a key point and is associated with an important step. This information must be available and known by the practitioner and/or student in order for them to perform the task correctly.

Secondary to key points and important steps is *indirectly* related knowledge about the task—information which increases an individual's breadth of understanding but which is not a primary requisite for correct task performance. Next we have a large area of unrelated knowledge which may be "nice to know" but which is not essential for correct task performance.

Incidentally, the JOB also aids in sequencing the instructional content contained within a specific module and within a series of modules. A visual review of key points, important steps, and indirectly related knowledge assists in association of similar information which at a minimum provides an opportunity to reinforce preview learning.

The step-by-step outline is checked by a group of outside experts for completeness and accuracy. The outline is then edited and prepared in the desired format. Artwork, photography, and final typing of the drafts are completed. The prototype module is then inspected and reviewed by members of the NTAC.

During the same time, a control system for use of the module is developed. The control system consists of the following steps: 1) student instruction, 2) a motivational introduction to the module (why it is important to learn this particular task), 3) a listing of technical vocabulary terms, 4) a bibliography of references and resources which may be available for student use, 5) enrichment material which may broaden the student's knowledge about this particular skill or set of skills.

As previously indicated, modules are self-contained instructional segments. The advantage of the modular curriculum is flexibility and adaptability of the teaching materials to different types of allied health workers. One or more modules may be combined to make up a unit of instruction. One or more units of instruction may be combined to comprise courses, and a number of courses constitute the curriculum. Of course, the curriculum is then the sum total of the learning experiences for which the school is responsible.

The next phase of activity within the subsystem of developing instructional material is titled formative evaluation. This process involves two distinct types of activity. The

first activity is called developmental evaluation. The prototype module has been assembled. The critical question that must be answered is: Can a student successfully learn from this programmed-learning, individualized-instruction manual?

In order to evaluate the efficacy of the module, several developmental evaluations are conducted. The first path is to have a naive subject, usually one of our secretaries, read all through the module and identify areas of inconsistency or areas which lack clarity. The next step is to find a subject representative of the student population, and to provide him or her with the equipment and space representative of that required in the learning environment. The student is then presented the module for study. His reactions to the module are observed and noted. Areas of difficulty, of imprecise language, of poor directions are noted and corrected.

When the student completes the instructional module, the performance test is administered. If the student can pass the performance test, it is assumed the module is a successful learning-teaching mechanism. This process is repeated approximately three to seven times for each module. During this iterative testing, the module is continually refined and debugged.

When it appears that the module is an effective teaching-learning device, the next step of formative evaluation takes place. That step is group evaluation. Project staff members identify subjects representative of the student population. At the same time, they obtain the equipment, space, and instructors representative of those required in a real teaching situation. The instructors are oriented on the techniques of teaching by way of programmed-learning, individualized-instruction manuals. The instructors then present the module to a group of subjects.

On completion of the learning process, each subject is interviewed, each teacher is interviewed, test results are analyzed, and the information is correlated and incorporated into revised editions of the module. This results in a continuous process of revision and upgrading.

I would like to relate a summary of what happened the first time we evaluated the instructional materials on a group basis. Incidentally, nursing materials were the first. After obtaining permission from appropriate authorities, orienting teachers and students, we were ready to try out the instructional materials (Metropolitan Hospital in Santa Monica). At the end of the first day a very frustrated teacher called, "Good Lord, I don't like this." For the next several days the instructor called very frequently with complaints— "I don't have anything to do." "The students are not learning anything." Project staff once again reviewed the proper method of use of the self-paced learning modules. We explained in more detail the shift of the teacher's role from that of a traffic cop to that of a manager of learning resources. By the time the first test project was completed the teacher stated, "You know, I'm busier now than I ever was; these students really focus in on important procedures and really phrase difficult questions."

As a result of this experiment, to this day the hospital uses the UCLA nursing materials and program for their in-service nurse aide training. Their results have been extremely good. They have better student retention during the teaching process and the quality of performance (assessed via floor supervision) has improved. They have also demonstrated the potential for career development. In the first pilot class, five of the original fifteen students went back to school to increase their knowledge and skills in the nursing area. In addition, on completion of training, it appears that students are being retained for a longer period of time as nurse aides.

Another example of this process: Our dental hygiene units were finished just before the associate director of that area went to Europe; we distributed the materials the day she left.

We distributed about 1200 of the "Detection and Removal of Calculus" learning packets to seven schools. The schools used them and sent the modules and evaluation sheets from the instructors and from the students back to the project office. These were independently collated by an outside consultant; then we employed an independent writer to review and evaluate the comments. At that time, Anna came back from Europe and she had an opportunity to review all of the collected information and to revise the instructional materials as required.

Finally, after all field tests were conducted, we produced the revised module. Frequently we had to re-do the artwork and the photography. We always had to cut and paste the narrative. Sometimes we did not define our terms appropriately or consistently. Based on information gathered from the students, the teacher, and the thorough review by the NTAC, the final product was at last completed and available for distribution.

We distributed the final product in one of two ways. We attempted to interest private publishers in distributing and marketing or in some cases we distributed and marketed the information ourselves. I believe that the interest and intent that private publishers have shown thus far is a great indicator of the value of the materials. When you have people putting their own money into the production process, it indicates that the material is more than satisfactory—or at least it is more than satisfactory according to the expectations of the publisher!

We have been quite pleased with the participation of W. B. Saunders, Charles C. Thomas, Reinhart, Lippincott, Reston and others in publishing and distributing the materials. Not only will their distribution of the materials increase the availability, but it will also increase the feedback for revisions and later generations of instructional materials. We are quite hopeful that we will somehow gain additional support so we can complete some of the instructional materials which have not been completed to date.

In summary, the productivity of the project has been 25 task inventories, 18 occupational analyses, and, if I'm not mistaken, 11 books or manuals. There was some fallout from the project. Educational Products Inc., at the University of Pittsburg, conducted task analyses in six areas using the methodology of the project; they obtained essentially the same results. South Dakota's project has been assisted by the UCLA Allied Health Professions Project.

Perhaps one of the most important fallouts at the culmination of any project is the distribution of people who work on it. We have now spread throughout the United States and each of us is using the materials, the concepts, the principles in our own locale to increase the efficiency in teaching allied health practitioners in our areas.

THE CLINICAL INSTRUCTOR TRAINING PROGRAM

Miles H. Anderson, Ed.D.

Clinical instructor training is crucial to the allied health program. Its main objective is to train hospital personnel to teach while on their jobs in the hospital. The reason for this is that the education of students who are learning to help sick people get well (and I always emphasize the idea that their function is to help patients get well) must, of necessity, take place on the job. It cannot be effective if offered partially in a college, special school, or nursing laboratory because sick people must be available for the students to work with. Thus, clinical instructor training solves the problem by training hospital personnel how to teach on the job in the hospital.

However, there are problems in getting clinical personnel to accept the notion of teaching on the job. Teaching is rewarding and fun, but trying to convince clinical people to take time from their duties to learn this is a major problem. Because they are working people who are needed on their jobs, I have found it necessary to condense my training program from 30 hours originally to 12 hours of concentrated instruction in order to facilitate their work schedules.

A second problem I find is the psychological aspect involved in the teaching/learning process. For example, the staff nurse doesn't feel that she is an instructor, partly because she has gone to school herself and thinks of teaching in terms of her own experience, e.g., sitting in a room filled with rows of seats and somebody up at the front with a blackboard and a pointer, lecturing. I have said, "No, no, that's not the kind of instruction we are talking about. The kind we are advocating is much simpler, easier, and a lot more fun. It is almost entirely individual instruction. It won't take you any time at all to prepare for it, and the rewards will be very great. Now, if you will go along with me on this, in 12 hours you will be able to understand it so that you can do it yourself, and then we will see what the results are." In fact, the results have been quite rewarding for those who have engaged in this activity as evidenced by the fact that many people I have taught have ultimately become trainers themselves.

This has actually become a self-perpetuating program because I always try to encourage the promising members of any one group who seem capable of teaching and who would enjoy getting up in front of a group and putting on such a program. Invariably there will be at least one or two. At Children's Hospital in Los Angeles, I found four such people, and now this procedure is an on-going part of their in-service training program with at least four classes a month being conducted. This began back in 1968, so you can see that the self-perpetuating aspect is quite important.

I think one mistake made by many schools is their failure to provide enough hospital clinical experience; and in addition, the hospital itself wants a piece of the action—a little credit, in other words. A good friend of mine in Chicago, where I put on four classes, had a very convenient affiliation with a hospital there. He got out a brochure to advertise an allied health program at the hospital and proudly sent me a copy of it. I happen to know

that he is pretty adept at writing nasty letters, so I wrote to him and said, "Now look, you got out this brochure to invite these students to your school. Every picture in it was taken at the hospital where they get their clinical experience working with patients, yet nowhere in this brochure do I see any mention of that hospital's name or who the clinical instructor trainer is or who the staff people are that train them. To look at this brochure you wouldn't think that the hospital even existed or that the students went to a hospital to get their experience. If I were the administrator over there, I would throw you out." You know, a funny thing happened about a year later—they *did* throw him out! He was getting all that service for nothing, but he failed to give them a little recognition.

There's another problem. It's not fair to ask people to do something for nothing. Especially when it is hard work as in teaching. I think that, if possible, it should be arranged so that the clinical instructors in the hospitals can be given a monetary reward for the extra work they do in teaching.

It is my feeling that most of our problems in getting them to work could also be solved in this way. As it is, about the best that I can do is to give them a certificate or an "instructor's medal of honor" or something of that sort, but you can't go out and buy a loaf of bread with that type of recognition.

In order to sell this program, I have developed a little presentation that is on a very elementary level. Remember, most of these people think of teaching as standing up before a group just as I am doing now, with a blackboard and a textbook. I want to differentiate occupational instruction from academic teaching methods so that you won't get confused with what we're attempting to do here. What we are talking about now is task-oriented instruction —in fact, that's the name of this little presentation. It doesn't take very long to explain and we'll just run through it very quickly. We will be very elementary in our approach; you have to get the idea across to the people you are working with. Otherwise you will not get the cooperation in the hospitals that you'll need if you want them to play ball with you and help you. They have to understand that this isn't nearly as complicated as it appears to be and that actually it is not only fairly easy to learn to do, but it is also a lot of fun.

It seems to me, I usually explain to these groups, that there are two basic purposes for a student to pursue education beyond high school (or while still in high school, because now we have dropped down to the tenth grade level in our secondary school program, and therefore I mention the fact that it really requires a secondary education as well). These two goals are occupational and cultural. The occupational goals either are or should be the acquisition of skills, knowledge, and attitudes that enable us to get a job, hold it, enjoy it (hopefully), and advance to higher levels in our chosen field of work. The cultural goals also encompass the acquisition of skills, knowledge, and again attitudes that are essential to fit comfortably and pleasurably into the desired social setting. In other words, we must develop the capacity to appreciate and enjoy aesthetic values—music, art, dance, ballet, or whatever you like, maybe just sitting in front of the TV watching a football game and drinking a beer—(I'm not condemning that—I enjoy it myself).

In our society, both cultural and occupational activities are desirable for a productive and happy life. Otherwise, we are out of balance. All occupations that are not anti-social or criminal in nature and that provide useful goods and services are respectable—everything from the garbage man on up to the President. However, we will confine our discussion to those allied health occupations that require some form of occupational education.

Education for cultural development should be largely a matter of personal preference anyway

because our tastes in these matters vary so widely. On the other hand, we ought to agree that there is little or no reason for what we used to call "faculty discipline." We hear about this notion every once in a while from a great many people who still believe that the study of cultural subjects is imperative (particularly if the subjects are what we used to call "solids"). This has been disproven convincingly by research done as far back as 1906, so that by now we should know that the old faculty discipline idea doesn't hold. We realize now that the study of geometry and calculus, etc., is not necessarily going to make a good plumber, p r se. Contrarywise, he must have specific training in how to be a plumber. Certainly he may enjoy calculus, but if he isn't going to be an engineer or take up some other occupation where he can use it, it's not really going to do him much good because he will just forget it.

So what is learning and what is task-oriented instruction? Learning is what happens when a person changes his own behavior (remember, this explanation is highly simplified for the people in the class). I smash hard on *"changes his own"*; you can't make him do it. That would be going back to the hickory rod, and you'd get nowhere with that. He has to do it himself—no one can do it for him—and he learns either by acquiring or discarding skills, knowledge, and attitudes. Actually, discarding is one of the most difficult learning situations (e.g., trying to learn to stop smoking). Skills are the ability to perform occupational tasks. Knowledge is the possession of and the ability to use scientific and technical facts. Attitudes are the sum total of the opinions, beliefs, and feelings we hold that influence our work, our fellow workers, our patients, our employees, our employers, and our environment in general. Let me emphasize again that learning includes the discarding as well as the acquiring of these behavioral factors; discarding obsolete skills, knowledge, and undesirable attitudes is a learning process just as much as acquiring new attributes is. In fact, most learners find it more difficult to discard strongly entrenched behavioral patterns or fallacious knowledge than to acquire new information and attitudes.

Let's assume that a task involves the performance of a series of physical, mental, and attitudinal acts by means of which one achieves a specific objective. In order to be teachable, the task must be specific, precisely stated, and free from ambiguity that would result in the omission of important details. For example, the phrase "position a bed patient" is too vague. There are a number of tasks included in this instruction, each different. "Position a bed patient in the SIMS position" is a more precise and teachable concept. "Teach an amputee to use his prosthesis" is too broad and imprecise; there are many kinds of amputees and many types of prostheses. Compare this to "teach an above-elbow arm amputee to operate the controls on a prosthesis with a Hosmer elbow and a Dorrance hook." Now you can get down to business; you know what the job is—you know what the task is. The first example is impossible in terms of usable behavioral objectives; you can't do it. But the second one you can. The first requirement for task-oriented instruction is a precise, accurate statement of the task to be taught.

Task performance requires the application of skills, knowledge, and attitudes, which cannot be accomplished without physical and mental activities. Indeed, there is no learning without physical and mental activities. Some people assume that task-oriented instruction is mechanistic—that it turns out unthinking robots who are ignorant of basic science, principles, and theory. This is not true, although I agree that the possession of scientific knowledge itself is of little value in pursuing an occupation—it is what you can do with it that counts. One of the toughest problems that I have wrestled with for over 35 years is to integrate these two concepts so that one supports the other, and then the basic science makes sense. We have to be willing to accept the notion that the mere possession of scientific knowledge in itself is of little value in pursuing

an occupation. It's what you do with the knowledge that counts, and when you do something with it, you are performing a task. Thus, task-oriented instruction in the basic sciences does not merely teach the facts; it also teaches how to use them.

Now let's examine the skill of teaching because we all know that teaching and learning must go together. Actually, people can and do learn skills, knowledge, and attitudes on their own; this goes on all the time. All of you, everyone sitting in this room, is learning something new every day, independently, without help from anybody. We can and often do change our own behavior without help by reading, performing a task, following instruction in a manual, observing an object, attempting by trial and error to duplicate it, and so forth. Since we can learn on our own, then why do we have schools and teachers? Why not just let everybody do as we do so much of the time anyway? There are several reasons for having schools and teachers, but the most important is lack of enough time. Time is of the essence. Organized education exists because we don't have enough time. Given enough years in almost any health occupations department, in medical technology, say, if I walked around in a medical technology department for a number of years without anybody paying too much attention to me, eventually enough would rub off on me so that I could become a medical technologist. That's the old pick-up method. True, it would take most of my working life to master it, but eventually I could do it.

Since we don't live forever, we have to make the most of the relatively short life span that is allotted, and this means that we must shorten the learning process. Well-organized and operated schools justify their cost (which is pretty considerable) by establishing the means by which students can achieve in minimal time the necessary occupational performance goals used for successful entry into and pursuit of their chosen occupation.

Teaching then, as I see it, is helping students to learn, or as we said earlier, to change their own behavior. You must always remember that as a teacher you cannot change the student's behavior for him, but you can help him to change it himself. A good teacher in a well-organized school helps the student to learn more in less time with greater retention than he could if he were just left to his own devices. If the school and its teachers do not do this, then they really cannot justify their existence because that's what they are there to do. Perhaps this idea seems harsh and materialistic, but remember, we're living in a pretty tough world in which money spent for education is more critically scrutinized than other expenditures. Voters are rejecting bond issues, universities' budgets are being cut, and I've heard this word "accountability" here a couple of times, as well as "cost effectiveness," etc. In the business world there is a very common saying: "time is money." Even in education we have to make the most of every minute that we can.

In health occupations education, task-oriented instruction is aimed at attaining more learning in less time but with greater retention. The instructor's job then is to help the student to change his own behavior, i.e., to learn. And although it is hard work, it is much easier if you follow a systematic plan.

The system in task-oriented instruction consists of four steps which are basic in as much as they can be implemented by a great variety of techniques, instructional materials, audio-visual aids, and the like. They form the foundation of the Clinical Instructor Training Program which I have taught for a number of years in hospitals to help clinicians improve their teaching on the job. I can't take time here to do more than quickly review the steps and their purposes.

Perhaps you think that the first thing to do would be to prepare what you are going to teach. But that doesn't work because preparing what you are going to teach depends

on how you are going to teach it. So I have found that you need to establish the teaching technique, i.e., the four sets of instructions. The first of the four steps is the Preparation. prepare the learner by getting him to relax so that his ability to think and remember will not be impaired. Then motivate him to want to learn by getting him interested in the task we want him to master.

This is a very critical aspect of all teaching, because it is here that we must get the learner to want to change his own behavior. To me, arousing interest in students is one of the most fascinating aspects of teaching because students are infinitely varied, and what works with one may not work with another. Explaining the task and its purpose is, of course, a first essential. Relating it to the welfare of the patient is the second one, and relating it to the student's own progress in mastering his occupation is the third. This is an aspect of teaching in which the only limitation is the teacher's imagination and ingenuity, as well as the study of each individual student to see where the ignition key is located that will turn him on. I have discovered that the ignition key is not located in the same place for any two students; but I have also found that an appeal to the desire to help other people in a hospital becomes a very powerful motivating factor.

In the "How to Instruct" reminder card that I use in Clinical Instructor Training, the Preparation Step is summarized as "put him at ease; find out what he knows about the job; get him interested in learning the job; and put him in the correct position to see and hear the job demonstrated."

The second of the four steps is the Presentation. In this step the instructor presents the skill or knowledge of the task to the trainee after he has motivated him to want to learn. In presenting a skill, the most widely used method is for the instructor to demonstrate how the task is done and to explain the procedure one step at a time as he does it. This technique can be used on either an individual or small group basis, and the instructor's performance must be as perfect as possible.

It is in the Presentation Step that audio/visual aids are most useful to the instructor. A well-made film of the task being demonstrated can be watched by one or more students, which relieves the instructor for other activities such as supervising other students who are learning to put into practice tasks they have seen demonstrated but need help and direction in actually doing them. The use of audio/visual materials in this way saves the instructor's time and increases his efficiency. However, to be effective in this way the materials have to be really well made, and unfortunately this is not always the case.

So, the Presentation Step is summarized as "tell, show, illustrate, one important step at a time; stress each key point, instruct clearly, completely, and patiently, but no more than the student can master.

Next is the most important step of all, Application. Immediately following the Presentation Step in teaching a task, the instructor has the student *do* what he saw demonstrated while the instructor watches closely, corrects errors, and gives help as needed to try to have the student experience success on his first try if it is at all possible. I think this is a very important factor. The Application Step is where the student learns by doing. It is here that he develops good work habits from the very start. The instructor is needed and absolutely essential in this step. He can guide the learner to success in performance with the use of suggestions, questions, repeat demonstrations in difficult steps, encouragement, and the maintenance of a calm and easy atmosphere. The Application Step is summarized as "have him do the task, correct his errors, and have him do the task again as he explains each key point to you; ask questions to make sure he understands; have him repeat the task until you know that he knows."

The last of the four steps is the Test Step. This is a check on the trainee's ability to perform the task correctly and without help. It is a means by which the instructor can discover any weakness in his own teaching while there is still an opportunity to do remedial work to correct it. He is concerned first with determining the trainee's ability to perform by having him do the task without help and then judging the quality of the results. In effect, this is a performance test which is vital to task-oriented instruction. He is concerned secondly with the student's knowledge of the task's key points involving basic science and theory. He can evaluate this by means of an oral examination, observation, or clinical instruction. Oral questioning is what we encourage. Teachers simply don't have the time to write a good test; certainly they can use written questions if they have the time, or they can use other methods. When you do step four, the test, put the student on his own, with no help; ask questions about key points to find out what is in his head. Most important, praise good work and don't chew him out if he makes a mistake. Finally, re-instruct to correct errors.

Now, in summary, the four-step cycle of instruction is the most effective technique that I have experienced to help learners learn, i.e., to change their own behavior. It not only provides the basic system for carrying on instruction; it is flexible and easily adapted to many variations. Teaching aids should be evaluated carefully in terms of where they fit into this four-step pattern. When applying the four steps, the commonest error is to omit or neglect step three, the Application, which is vital to task-oriented instruction; without it, you aren't doing the job the way it should be done. There can be no learning without physical and mental activity. Learning by doing is the heart of the Application Step. This is where I pause when working with a group in a hospital in order to give them a kind of over-view of what it is all about, although I don't go into the matter of "How to Get Ready to Instruct." (On your cards you'll see that one side is entitled "How to Instruct" and the other side "How to Get Ready to Instruct.")

When I travel to teach my clinical instruction courses, I carry as little equipment as possible; I have learned to use a 5 x 8 card for much of my work. I never use projectors, but prefer to do things as simply as I can, and I depend on easy little teaching devices to get the job done.

Now we will turn the card over and discuss "How to Get Ready to Instruct." This is where we teach how to analyze a task by breaking it down into two columns, i.e., placing the important steps in one column and the key point of knowledge needed to perform that task in the other column. I make it clear that this should not become a long, laborious job; it can be done on the back of an envelope. The idea is really to get the students to think through the task: "What is the first thing to do, and what do you have to know to do it? What will you do next? What do you have to know to do that?" I tell them to use abbreviations. Don't write out big long sentences because you'll never read them and you haven't got time anyway. This is a note from yourself to yourself. You're not going to give this to the student. This is merely your guide to putting on the demonstration in step two. Keep this as simple as you conceivably can make it. It is extremely important that we make these clinical people become education-minded, which of course they are not when you first deal with them. They think that teaching is some mysterious priesthood where caps and gowns are worn and everyone has a degree and a long row of letters after his name.

Clinical instructor training will go a long way, but don't go into a hospital and try to ram it down their throats, or try to sell it as a panacea for all ills, or promise that it will be a lot of fun. But it will save them time and their mistakes. Less material will be ruined, and there will be savings in 50 different ways if a good job of instructing is done. And it doesn't take a lot of time. This is the most important factor of all.

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CAREER MODEL DEVELOPMENT AND A MODEL CURRICULUM: THE NURSING PROGRAM

Lucile A. Wood, M.S., R.N.

During the years since the beginning of the UCLA project, great progress has been made in developing career mobility opportunities in nursing. In 1970, the National League for Nursing made an Open Curriculum Position Statement suggesting that all nursing education programs provide for career mobility. It also had some general beliefs about education programs for nursing that I think are important for all of us to think about today in the allied health fields, specifically that individuals who wish to change career goals should have an opportunity to do so. Educational opportunity should be provided for those who are interested in upward mobility without lowering the standards of the field. In any type of nursing program, opportunity should be provided to validate previous education and experience. Sound educational plans must be developed in order to avoid unsound projects or programs. There should be more effective guidance at all stages of student development. And, if projects and endeavors in this area are to be successful, nursing must accept the open curriculum process. The UCLA staff does accept the open curriculum process: students should have the opportunity to change career goals and continue their education throughout a life-time.

As late as 1973, the National League for Nursing published the Directory of Career Mobility Opportunities in Nursing Education. Of the total 2,687 nursing education programs, 55% have provisions for career mobility opportunities. There are 1,377 programs which prepare for the RN license; 64% of the total programs offer mobility. Of the associate degree programs, 77% offer some form of advance placement or mobility, and 82% of the baccalaureate programs offer mobility. Of the 1,310 Practical Nurse programs, 37% report some method for career mobility. I think that is a pretty outstanding thing for nursing to have accomplished in a fairly short period of time.

For those of you who know very much about nursing, we are usually slow about changing, and we have been very traditional in our approach to practically everything. For myself, however, I have done pretty well in changing in most areas. I finally was able to wear pant suits at work, and that was really very hard for me to do! I have changed quite a bit but there are still some things that I cannot give up, and I think that is probably true with many nurses. But, I believe that the nursing influence and the nursing input at the UCLA project really broadened the rest of the staff.

In my travels across the country I have found many nursing educators seeking positive methods for their graduates to continue in career opportunities. However, there still seems to be some reluctance to look at the entry point of their respective curricula. It does appear from the NLN directory that most of the RN programs are rapidly making progress to provide career mobility opportunities. It seems to me that there is a paradox here. Faculties are actively seeking ways for their graduates to proceed in a career ladder, but some faculty members still have blinders on when someone

comes knocking on their door. We really don't seem to be very trusting of one another, do we? Unfortunately, it is the student who is caught in the crossfire.

There are a variety of career mobility patterns in nursing that are now being utilized. Probably the most common one is credit by examination, or challenge exams. The multiple exit programs with entry and exit, re-entry into the field, and exit again are usually within one institution. There are some cooperative efforts in existence, and undoubtedly more will evolve with the continuing efforts of all of us to economize in the use of faculty, supplies and equipment, educational institutions, etc.

There are also the specialized programs which admit already licensed nurses, e.g., LPN's who can get their RN license within a one-year period or RN's who may be admitted to the baccalaureate program. And then, of course, we have the external degree program currently being offered in New York. This program emphasizes the demonstrated skill and knowledge of the practitioner regardless of where or how it was attained. In other words, they are trusting that you can, in fact, learn something outside of the classroom and the educational institution.

In the 1960's, with our emphasis placed on credentials, we put unrealistic burdens on the educational institutions to prepare practitioners in addition to pushing job qualifications far beyond those needed to do a job. It is not possible for everyone in an organization to be prepared for the top level job. In actuality very few top jobs exist. In addition, those with credentials become disenchanted very quickly with the so-called lower jobs and frequently become the troublemakers for the employer. Can we provide self-actualization for the bulk of jobs in the health field? I believe we can if we permit and encourage life-long continuing education so that the highest quality service can be given to our patients while at the same time permitting the learner to extend his sphere of understanding.

Before I begin a description of the function of the career model, I would like to briefly review the UCLA Allied Health Professions Project. I know you talked about this yesterday but I just want to recap it quickly for you. The project was funded for four years by the U.S. Office of Education. It began operations in August, 1968. The project was administered through UCLA's Division of Vocational Education, and the main thrust of the project was directed toward curriculum research and development in 18 allied health occupations. Nursing was one occupation researched and probably the most important one.

The project also had a secondary school demonstration program which provided tenth grade students with an introduction to the health field. During the eleventh and twelfth grades, these students selected the occupations they were most interested in. Classes and laboratory practice in a clinical setting were offered on a regular basis, and, at the completion of the twelfth grade, these students had the possibility of completing the entry level curriculum in their chosen field. They were, therefore, equipped with a salable skill on the job market. As an alternative they could continue with their education at the second step of their occupational curriculum in a post-secondary program. Although the research grant has completed its four years of effort, many high schools throughout the country are still utilizing some of the tools and concepts developed on the project. But you will be hearing more about that aspect of the project on Friday.

Returning to the major thrust of our project, the curriculum for each of the 18 occupations was built on national occupation survey data with four main objectives: 1) development of curricula in health related fields; 2) consideration of core curricula; 3) consideration of career ladders or lattice; and 4) development of instructional materials.

The project methodology followed ten basic steps which were: 1) identification of all tasks,

skills, or activities in a functional area; 2) verification of these tasks through a national field survey; 3) determination of the process used in performing these tasks as well as the knowledge and skills needed for satisfactory performance; 4) development of behavioral objectives or performance goals; 5) development of curricula which will include career ladder concepts, continuing education capability, obtainment of degree objectives, and transferability of credit; 6) development of innovative instructional materials based on a modular concept leading to a core curriculum; 7) testing the instructional materials in the field; 8) evaluation of the instructional materials and revisions as needed based on the feedback from the students and the faculty (on the entry level nursing instructional units, we had 23 testing sites using our material and we were able to do several revisions before they were sent to the publisher); 9) production of the materials; and 10) the distribution of materials.

The entry level nursing curriculum which was developed on the project is being distributed by W. B. Saunders in volumes one and two, *Nursing Skills for Allied Health Services.* Volume three of the text should be distributed by them in the late summer.

Our national nursing survey revealed that 60% of all the functions designated in our survey instrument were performed by everyone in nursing—that is, the nurse aide, the LPN, and the RN. These skills are readily recognizable as essentially the fundamentals of nursing. The instructional materials that were developed from the occupational analysis include not only important steps in the performance of each skill, but each step is amplified by key points that clarify the important steps. In addition, related anatomical and biological principles and micro-biological concepts, communications skills, legal, ethical and safety guidelines, as well as elementary problem solving approaches are incorporated.

The 36 instructional units which eventually were published as *Nursing Skills for Allied Health Services* have been adopted by all types of schools of nursing, e.g., LPN, associate, diploma, and baccalaureate programs. In addition, extended care facilities and acute care facilities are using these text books as procedure books. From these statements you can see that it is possible to develop some standardization in the performance of the basic nursing skills as well as a core curriculum concept which could then serve as a base for mobility.

You may be interested to know why the title of the book was selected. We actually had a little office contest. This was the first book we had to name and we had all kinds of suggestions including *The Sensuous Nurse* (because at that time *The Sensuous Man* or *The Sensuous Woman* had just come out). Anyway, we had very snazzy titles, and, being the sedate people we were, we thought that we had better be a little careful about our final choice. Since our project was called the Allied Health Professions Project, it seemed that it would be fitting to have that in the title of the book. But also, as we worked on the project we found that many of the skills and the instructional units that were incorporated into the nursing curriculum were, in fact, skills that should be incorporated into other allied health curricula, e.g., hand washing for medical asepsis; ethics; legal guidelines; body movement, balance and alignment; isolation techniques; vital signs; etc. And as we discussed the project, we found that practitioners in the laboratory, respiratory therapy, radiology, or medicine simply did not have these kinds of topics covered in their curricula. And, of course, they are vitally important in terms of patient care and also for one's own personal health care. So quite a number of the units in the first two volumes are, in fact, incorporated in some of the other educational curricula—in laboratory, respiratory therapy, the health careers programs in the high schools, etc.

The close working relationship among the AHPP staff demonstrated clearly that each of us benefitted by the input from the other allied health professionals. We found that by working together we extended the knowledge and skills each of us brought to the project in many diverse ways which were unexpected, challenging, and motivating. In fact, many of us who have left the project are implementing these same concepts in our present settings. We had a unique staff that got along tremendously well together.

To return to the nursing survey, we found that the next 28% of the skills beyond the initial 60% were more complex skills such as sterile techniques, giving of medications, assisting with somatic therapy, assisting with various treatments and examinations, the identification of patient needs, the interpretations of signs and symptoms, teaching of simple health measures and procedures, and selecting the best approaches to patient care. These 28% were done by the RN/LPN combination. The remaining 12% of the activities identified in our national survey that were described as strictly within the purview of the RN were: the administrative techniques of planning patient care, assigning personnel, evaluating the quality of patient care and employee performance and making appropriate adjustment in both of those areas, teaching programs for patients and employees, and complex nursing skills. There were only six skills which the LPN's were not able to do and those skills remained exclusively within the RN realm. They included the following: the administration of vital medications and blood transfusions, reading of fetal monitoring devices, reading cardiac monitoring devices, reading of skin tests, tracheal suctioning, and the insertion of nasal gastric tubes.

At recent workshops in which I have participated, nurses from the various states continue to validate the results of our 1969 survey. However, in the last two years, I have found that the LPN is using almost all of the skills which were originally identified as strictly within the RN purview. Yet we continue to prepare these nurses in various programs—LPN, associate, diploma, and baccalaureate programs. This is a paradox to me and to many others.

In 1972, the Educational Projects Incorporated, Allied Health Professions Project in Pittsburgh validated the UCLA AHPP nursing occupational analysis with only minor variations. The report stated that in 1972 nursing was in a period of transition. For those of us involved directly in nursing education and nursing service, this seems to be the understatement of the decade! However, progress is being made as outlined in the National Commission for Nursing and Nursing Education's Implementation Report—"From Abstract into Action," and in the recent NLN publication *Directory of Career Mobility Opportunities in Nursing Education.* The latter report demonstrates that more than one-half of the schools of nursing in the country already are providing career mobility opportunity, and much of this can be attributed to legislation within the states which has been the direct result of societal unrest generated toward the educational institutions during the 1960's. I know that in California we had extreme problems with the legislature telling us what we were going to be doing in nursing education long before the educators were ready to work on the problems, which then created its own set of problems for us.

During the 1960's there developed an overreliance on credentials which ultimately pushed job qualifications completely out of line with actual knowledge and skills required for the job to be done. This not only burdened the educational institutions but gave students an unrealistic view of what the piece of paper or "the union card" could do for them throughout life. The belief was that when we got that piece of paper, we were set. Well, unfortunately, that doesn't happen to be the

case. In the late 1960's, employers began to have second thoughts about the credentialled employee. That is, the credentialled individual had lots of knowledge but not necessarily the skills required for the job. This was costly for the employer in providing extended training to prepare the workers for their jobs. In addition, the over-educated employee often became bored with his job which resulted in low morale, poor work performance, and high labor turnover—all costly for the employer, the employee, and ultimately you and me, the consumers. That is why the focus that the UCLA staff put on ability to perform seems to be a great merit in curriculum constructions. That is, we did the occupational survey to determine exactly what it was that people were expected to do on the job, and then we developed the building blocks of the curriculum thereby teaching the students how to perform the essential skills until the stated criterion was achieved. In addition, we incorporated not only knowledge that was critical for correct job performance but general and "nice to know" information within the time parameters established by the faculty. In other words, your time frame is the only limit to how much you can put into the curriculum; you can put in as much as you have time to do. In this way we involve the learner very early in the educational curriculum by having him put to use his newly learned knowledge and skills in the field of his choice. We also provide a sound scientific basis for continuation in the career plan of his choice.

Perhaps if I discuss here the curriculum plan for nursing, the previous statements will become a little clearer. Although I'm talking primarily about nursing, I will endeavor to demonstrate the applicability of the model to other health disciplines. Since this is a "functional model," I have defined function as the entire range of nursing activities and their consequences which relate to helping an individual patient, student, or practitioner establish an optimal relationship with the surrounding environment. The model includes not only the fundamental nursing skills that are reflected in our national survey, but also a moderate amount of related technical information in the physical and biological sciences along with a minimal amount of general knowledge.

In the beginning stage of the curriculum, most of the material is skills-based; there is very little technical or theoretical knowledge. As we proceed through the nursing curriculum, however, you will find that there are fewer new skills to be learned but much more knowledge to be retained. During stage one, the beginning practitioner has the opportunity to learn and practice the nursing skills until a moderate competence is achieved. In our initial testing program, the time required to complete this part of the program varied from six to twelve weeks, forty hours a week. This time included class instruction, practice, and clinical assignments. Most of our test faculties and students agreed that an eight-week program, or roughly 320 hours, was minimal to accomplish all of these activities.

This first stage of the model was built on the AHPP's information which indicated that 60% of all the activities are common to all nursing practitioners, i.e., the nurse aide, the LPN, and the RN. In the registered nursing programs (associate, diploma, and baccalaureate programs) there is quite a variation in the amount of clinical time that students receive in the field. If they have twelve hours of clinical time per week in the field for 50 weeks a year, you are talking about a total of 600 hours in the clinical area or 15 weeks in the year!

Now let me clue you in to what happened when I was a student in a diploma program in the 1940's. At that time it was a 50-week program; we had two weeks vacation a year. We worked eight hours a day, six days a week, and we had classes in addition to the work. Now, in terms of the amount of information we had

to learn, you know it really wasn't very much. What we have done over the years is to decrease the time needed in the curriculum and yet we have at least fifty times more information to get into that shortened time span. One of the major things that has been cut out of all the nursing programs is the clinical practice, and I know of no exceptions. It is fine to have the information, but you must put it to use! I switch between education and service periodically so I can see what service or education is doing. When I think education is not doing what I think it should, I go over and straighten it out, and then I come back and see what the service end is doing. I try to utilize the best of both worlds.

I'm really very disturbed with the kind of practice that nurses are giving throughout the country and the kind of care the patients are receiving. I do think that it can be improved. I think we can, in fact, give nursing care like we did in the old days but really give a better quality care because we have a lot of theories behind us now which enable us to know what we are doing and why, and we can adapt alternatives to meet each patient's needs. So I'm back in nursing service to prove that we can do just that.

One of the major problems employers are having now with new nursing personnel is their lack of ability to perform basic nursing skills. Stage one, as described earlier, would permit the learners sufficient time to become moderately competent in these skills. In practice, we have found that the more time students spend with patients, the more they see their own lack of knowledge and skills; they then become motivated to learn more so that better patient care can be given.

It was really sort of interesting to view the results of our initial testing procedures with the nurse aide program at St. John's Hospital in Santa Monica, California. They had always had an eight-week training program for their nurse aides, but they agreed to take our instructional materials and use them one time to see if the materials would work. We did not tell any of the staff of the nursing units that we were making changes; we simply made the changes in the classroom. And, of course, the students did not know there were changes. What happened was very interesting. The students very quickly were involved in nursing care. They were asking all kinds of questions about why they couldn't do certain things for their patients (they were very limited in the beginning in the kinds of care they could give and what patients they could have assigned to them). The students did a tremendous amount of outside reading. Before long the nurse aides they were working with on the floor who had come through previous programs asked the instructors what they were doing differently because these students had so much more information. The supervisors were extremely pleased because the students were looking for additional work to do, and they were not satisfied with just telling one of the RN's that somebody's temperature was high; they waited until the RN actually took some action about it, which was quite a different kind of thing from what most aides generally were doing. And so they found that the students were very eager to learn more.

We found this to be true in our secondary school project, too, where the students gained more knowledge and began providing direct care to patients. They soon found that they really did not know very much and that they had an awfully long way to go; and this pushed the students to do extra reading. I think we probably do not give individuals enough credit for self-motivation. We just have to give them an opportunity to see what they need to learn and then, of course, put them into a structured program with a good faculty that can lead the student along.

Research studies with new graduates from various schools of nursing programs repeatedly describe their dissatisfaction with the low level of performance in nursing skills. The

educators know this, the students know this, certainly nursing service employers know this. Nursing service employers have been upset for many years about the lack of ability of new graduates to give care. With the approach we have developed at UCLA, we feel we can do something constructive about improving the quality of care given patients.

Stage two of the functional model would prepare what I choose to call the basic nurse practitioner. Included in this block of the curriculum is the remaining 40% of the activities identified in the project—that is, the 28% that were the RN/LPN combination and the 12% that were, in fact, identified for the RN only. I combined these activities because it seemed like the logical thing to do at the time (early 1971). Also, I have had an opportunity to do conferences around the country and I am finding that the LPN is, in fact, doing everything the RN is doing. Obviously, they don't have the theoretical background, but a lot of these people have done a considerable amount of self-learning. They are really motivated and some of them are very fine practitioners as well.

Stage two encompasses some pretty complex nursing skills and beginning theoretical development in relation to human function, combining the theory of practice and problem solving, decision making, and communication skills as well as administrative and teaching skills. From the proposed model, for stage two I see the possibility of blending the strengths of the present LPN, associate degree, diploma, and, in some instances, baccalaureate curricula to develop a competent basic nurse practitioner who can function efficiently.

Now let me explain this further. The LPN is a licensed nurse who has generally completed twelve months of experience in giving bedside care. in addition, their courses give a reasonable introduction to the various scientific subjects. The Associate Degree Nurse (ADN) has two years experience in the academic setting. This program provides moderate opportunities to give bedside care, usually no more than 20 hours a week during the semester. In addition, these students become oriented to the academic setting by obtaining the scientific knowledge required for their nursing subjects plus their general education courses which are required to get the associate of arts degree. It gives students an opportunity to see how other students function within the educational institution. This program also gives its graduates a big boost if they elect to continue in the academic field and obtain additional degrees. On the other hand, the diploma nurse usually evolves a close identity with her training setting which is shared with the staff working in the service setting; their pride in their service really develops close working cooperation. Often many of these graduates remain with their own home school.

In the early days of the diploma program the priority for giving nursing care was favored in some instances in place of the education of the nurse. And I can certainly say that was true when I was a student. We knew this as exploitation of the student for the benefit of the hospital. There were some bad things about that practice, but there were also some advantages. Today most diploma programs have come close to holding the same tenets as their peer programs housed in academic institutions which provide students with an educational opportunity. Thus, it seems to me that the bedside competence of the LPN, the opportunity to identify with an educational institution as seen in the ADN program, and the shared identity of the hospital/school diploma program should be valued components of any nursing program.

If the basic nurse practitioner, and you will notice that I have stayed away from all of the familiar job titles, should become stage two of the nursing career sequence, then it would be necessary to require only one nurse practitioner license. This would help eliminate the disagreements within nursing over the "technical" and "professional" as well as the other licensing titles in nursing. In any of the jobs

that we do, there are some elements of technical work and there are some elements of professional work. Those words really have created many barriers in nursing, and I would like to see them dropped from the vocabulary. If the nurse practitioner elects to move in a career sequence, it should be because he or she wants to change functions.

Stage three of the model would provide the beginning skills and knowledge needed to teach, administer, practice, or consult in a specialty area. In addition to increased theory in the specialty, the students would acquire knowledge of basic administrative and educational methodology which would prepare these graduates to be employed as beginning faculty for the entry level and nurse practitioner program—that is, stages one and two of the career model or the beginning administrative positions in health agencies.

In the time taken to attain it, the present baccalaureate degree may be comparable to the proposed stage three. However, it is not at all certain that two years will be needed to complete this phase. If our aim is to prepare a nurse to function at a certain level, a degree may or may not be necessary. This matter continues to be questionable. As a case in point, at the completion of stage two, the graduate may desire to take one of several courses to increase knowledge and skills in a specific area; for example, critical care nursing, respiratory therapy, family health practice, geriatric nurse practice, pediatric nurse assistant or associate, etc. These courses, as you know, vary in length from four weeks to two years and thus could result in certification or recognition apart from the academic degree. This recognition could be given through an Academy of Nursing as proposed in the Commission Report and which has now been established. If the academic degree is desired in addition, then the practitioner would have to meet the institution's academic requirements, too.

In a current nursing journal, I noted that over 1,000 nurse practitioners have now been prepared and are organizing in special interest groups for recognition and continued education. So the practitioner programs have really sprung up all over the country and lots of nurses are involved in them. In fact, current research does not seem to demonstrate a great difference in the varying basic preparations of the experienced nurse — the associate, diploma, or baccalaureate — in their ability to become competent nurse practitioners from any one of the current programs, e.g., pediatric, geriatric, or family health. In other words, I'm saying that it really does not seem to make any difference whether you have an associate, a diploma, or a baccalaureate degree when you continue in the practitioner programs; all three of these are seemingly equally successful. The research finds that the RN's with experience and personal motivation can successfully complete the practitioner programs of their choice regardless of their basic preparation.

In the past we have been trying to upgrade nursing, and I believe we need to do this as much as anybody. I think the complete emphasis on the piece of paper is the wrong approach. It is very important for some people to have an academic degree in their own right, but it is not important for other people. I think we need to recognize that fact.

On the employer's side of the fence, with the state and federal governments and third party taxpayers looking very critically at cost effectiveness programs within health agencies, it is going to become much more expedient to hire those practitioners who have the knowledge and skills needed to do the job rather than hire the expensive academically oriented staff to do the routine work. In the future, employers will be hiring the highly skilled and educated practitioners for certain positions, but these positions will entail functions which cannot be done by the lesser prepared. In other words, there is going to have to be a definite change in the function of people who acquire academic degrees.

Quality assurance programs based on stated performance criteria and utilization tools which are being recommended by licensing and accrediting agencies will mandate a closer working relationship between the employers and educators and future allied health practitioners. Workers will have to perform the stated functions to criterion levels established in the agency, and, therefore, the educators are going to have to prepare workers that can be functional in the health field. I think there is great evidence in the country that service and education are in fact beginning to talk together. In some places this is better than in others. If we don't do it ourselves, then it will be done for us from the outside. It seems to me that we should be the ones to take the bit in our mouth and run with it.

Stage four of the model would prepare the teaching faculties for the stage two, three, and four programs as well as preparing administrative personnel for large medical centers and health agencies. Beginning research methodology would be offered at this point in the curriculum. I believe this is necessary to enable stage four graduates to be strong supporters of research in nursing, and they would also assist in identifying clinical nursing problems for research. The curriculum at this stage would be of an advanced, academic nature covering teaching and administrative techniques that could be applied specifically to the areas of nursing education and administration. In other words, stage four of the curriculum would not, at this time, include high level nursing theory. However, there certainly would be a strong possibility of that in the near future when the fifth stage of the model could be fully implemented.

Stage five of the model should prepare the nurse researchers and would be on the level with the present doctoral degrees. The functions of these graduates would be to expend their efforts on research in order to assist in the development of a scientific body of nursing knowledge. Although nursing research and the development of nursing's own body of knowledge is the major limitation to our "professional stature," many changes are, in fact, occurring in nursing research. We now have over 1,000 nurses who have doctorates and many more are enrolled in doctoral studies. Nursing research is now dealing with the effects of specific nursing care on the recovery of the patient.

We are beginning to document with nursing research some of the beliefs about nursing care that many experienced nurses have had over the decades because they found that their techniques were successful after using them on their patients. Until they were documented by research study, certain practices had been guided simply by feelings or hunches of the nurse. These successful treatment programs were rarely passed along; they were gained with experience in nursing, if they were gained at all. So the basic research in terms of clinical nursing really will help us improve the quality of care.

The clinical nursing knowledge that we can obtain from nursing research will not only provide a higher and more consistent quality of nursing care, but it will assist us in establishing standard care plans by which practitioners can be evaluated. And that is what the whole game is about. On the nursing service side of the game is the Joint Commission for the Accreditation of Hospitals (JCAH) which is now setting up standards of performance. Nursing personnel must be able to demonstrate a change in patient care in order to become accredited. This provides a tremendous challenge for nursing service people to get with it in terms of performance objectives and behavioral goals and so on.

I see this model as being a sound method for developing nurse practitioners who would assure competent nursing care in any health setting. More importantly, each successive stage would include increasing and cumulative competencies in nursing practice, decision

making, and problem solving, as well as administration, communications, and teaching skills. In every position that a nurse holds, she really has to be an administrator of some sort and she does have to have some teaching skills. And, in general, these kinds of skills are not taught to nurses to the degree that they need to be taught.

Let me briefly review the stages of the model based on function that I have outlined for you and give you my estimation of percentages of representation in the nurse population. When I originally prepared the model we had about 200,000 people working in the field of nursing. My predictions are based on that figure. As you recall, stage one would prepare the entry level nursing practitioner in the fundamental skills, so this group would comprise about 25% of the total population. Stage two would prepare the basic nurse practitioner who would carry the bulk of the direct nursing service to the patient. Stage two would prepare about 50% of the work force, so these two stages together would be taking care of about 75% of the nursing force. The size of this group might be increased in the years to come as our delivery of health services changes, which I believe is a real possibility with such a flexible, open-ended model as I presented here.

It would be difficult to alter my views on the composition of the first two stages. However, I could be persuaded to change any or all of my views on stages three, four, and five upon the presentation of comparable data. We have not done any research yet at the three, four, and five levels, and thus my ideas for the model are as good as anybody else's.

Stage three of the model would prepare the beginning nurse educator, administrator, practitioner, or consultant in the specialty area. This group would comprise 15% of the work force. Stage four would prepare the teaching faculties for the mid-level and graduate educational programs as well as preparing nurse administrators for large medical centers and health agencies. Nine percent of the nurse population would be needed to fill these key positions. Stage five would prepare the nurse researcher. If 1% of the total nursing population could be involved in nursing research, we could expect to see a vast improvement in clinical practices in the next two decades.

I believe that this model provides for creativity and flexibility based upon local, state, regional, or national needs. It provides the mechanism to easily drop activities and content that are obsolete as well as providing an easy method for adding new content when appropriate. As I have worked with nurses around the country, I have become convinced that there is much more commonality among us than there are differences. As a member of the UCLA Allied Health Professions Project, I had a unique opportunity to see an overview of nursing that few in the field ever have. I urge all nursing educators, and all health educators for that matter, to guard against tunnel vision from your own little perch. Do not laugh at or discard unusual approaches to developing alternative learning opportunities. Keep an open mind. Take on all comers, tally the results, and obtain the best solutions for your purposes.

In the model presented, no reference has been made to the educational settings. Diversity is the concept to be developed. The final report of the Commission on Non-Traditional Study, *Diversity by Design*, makes many recommendations for action for the educational setting such as providing life-long learning opportunities, not only basic but continuing and recurrent programs, and a shift in emphasis for academic settings from degree granting to giving service to the learner. The report recommends greater utilization of existing and newly developed non-traditional forms of education and materials, and the development of agencies to keep and disseminate student

credits and to provide creditable counseling when needed by the learner. The various non-traditional and traditional education programs should not be seen as entirely separate entities; efforts should be made to make them interchangeable. This could be done and standards and objectives could be developed which could be utilized to prepare the practitioner in his field of endeavor regardless of the setting.

Broad support and encouragement have been given to non-traditional study efforts, so much so that they have been incorporated into the law as the Educational Amendments of 1972 to the Higher Education Acts of 1965. These amendments propose improving secondary education by providing assistance to educational institutions and agencies for the following purposes: 1) encouraging the reform, innovation, and improvement of post-secondary education, and providing equal educational opportunity for all; 2) the creation of institutions and programs involving new paths to career and professional training and new combinations of experiential learning; 3) the establishment of institutions and programs based on the technology of communications; 4) the carrying out in post-secondary educational institutions of changes in internal structure and operations designed to clarify institutional priorities and purposes; 5) the design and introduction of cost effective methods of instruction and operations; 6) the introduction of institutional reforms designed to expand individual opportunities for entering and re-entering institutions and pursuing programs of study tailored to individual needs; 7) the introduction of reforms in graduate education, in the structure of academic professions, and in the recruitment and retention of faculty; 8) the creation of good institutions and programs for examining and awarding credentials to individuals and the introduction of reforms in current educational practices related thereto. So there is a lot of emphasis on non-traditional approaches.

Another and considerably more complex problem that must be worked out is the transferability of credit from one setting to another. A workable solution to this one problem alone would serve to speed up the preparation of nursing practitioners needed to meet our increasing health requirements. Nurses representing all types of nursing programs in New Mexico have been sitting down together and establishing entrance requirements for each level program so that their graduates will be accepted in the next step of the career ladder. In addition, together they have worked out statements describing the graduates of each program. In this way they are attempting to delineate the differences among the practitioners so that all types of nursing programs are not in fact producing identical nurses. As I worked with the nurses in New Mexico, we found that the LPN's were doing much the same thing as RN's were doing. And the LPN faculties were so pushed trying to get all the required information into a one-year program that they really didn't know how they were going to do more. So we gave all of the nursing educators an opportunity to look at and listen to the various nursing programs and the contents and problems of each. They have selected the contents to be given at each level of the nursing curriculum; and they have also decided who will teach what content so that they could begin to develop the content itself. Completion of one level in the nursing career sequence will permit total acceptance at the next level as the student wants to progress.

It is possible for nurses to get together to work out some of their differences as you provide the career mobility. These have been agonizingly difficult tasks, but the nurses in New Mexico have become more knowledgeable about each other's programs and they are now more willing to compromise some of their cherished precepts for the greater good. Every one of us here today will have to compromise some of our cherished precepts. Similar activities are underway in other states, and most of the efforts are being documented in various reports and papers.

There is a natural evolution in most of the programs, but not in all of them. This certainly makes it necessary for each of the health occupations to look at what it is doing and to provide opportunities for career mobility. For example, in medical laboratories, stage one is the lab assistant, stage two is the medical technician, stage three is the medical technologist, stage four is the medical technologist administrator, consultant, or teacher, and in stage five we would have the researchers in medical technology. I know that some of these areas do not exist, but why don't they? This seems like an appropriate approach.

The model can also be applied to respiratory therapy. I have had a terribly difficult time with that field because on the project it was called Inhalation Therapy and the national organization has changed the name to Respiratory Therapy. So, anyway, we are talking about respiratory therapy aides for stage one, respiratory therapy technicians for stage two, the respiratory therapy technologist for stage three, the administrator, consultant, or teacher for stage four, and stage five again would be the researcher. (And there certainly needs to be a lot of research done in the field of respiratory therapy.)

Then I took it upon myself to apply this model to the physicians. At this point we would probably eliminate stage one for the physicians, but stage two would be the physician assistant that we are hearing so much about now. Stage three would be the MD in the specialty area. Stage four would be the MD with advanced information in a specialty and he would be an instructor in a medical school or an administrator in a health agency. Now, why in the world physicians believe they can teach and administer when they have not had any of this training in their background is beyond me! And then MD's for stage five would be in research. This seems to be a logical sequence for MD's as well as for everyone else.

I even applied this model to dentistry. Stage one would be the dental technician or the dental assistant; stage two, the dental hygienist; stage three, the dentist; stage four, the administrator, consultant, or instructor; and stage five, the dental researcher. It really falls right into line for every one of the health occupations, and it gives you some direction for moving in a career ladder.

THE COOPERATIVE RELATIONSHIP BETWEEN THE SOUTH DAKOTA STATEWIDE CORE CURRICULUM PROJECT AND THE UCLA ALLIED HEALTH PROFESSIONS PROJECT

Donald G. Brekke, B.S.

For quite a number of years now there has been a lot of talk about the need to develop a core curriculum in the health occupations, but very little has been done about this need. In South Dakota, we decided that rather than try to develop a core in one selected area we would go into all the health occupations training programs that we had in our state.

I think that I should give you a brief background into how the project came into being and tell you about some of the people who really had foresight to try to develop something like this. Our state, as you know, is very rural with the exception of about four communities, and even they are still quite rural; so we do have a rural problem. We have one physician for every 1,262 people as compared to the national average which is one physician for every 608 people. We have 17 counties in our state that do not have a physician. We also have 21 counties that do not even have a hospital, and our counties are quite large.

In 1967, Dr. Robert Hayes, Secretary of the State Department of Health (at that time Dr. Hayes was the director of the South Dakota Regional Medical Program) decided that something had to be done in the area of health manpower to try to meet future demands to provide more trained personnel and alleviate those problems caused by maldistribution of personnel. Dr. Hayes worked out an agreement with the State Department of Health and Comprehensive Health Planning (CHP) to pool their efforts and some of their resources to bring on board someone to work in the area as a Coordinator of Health Manpower Development Programs. The title was very long and the job description was about five pages. The hope was that work could begin on a core curriculum in health occupations.

In 1970, they actually created the Coordinator position, but they needed money for it so they obtained the funds half from CHP, half from RMP. At that time there was still not a core curriculum project so they came to me and asked if I would be the Coordinator of Health Manpower Development Programs and Project Director for the core curriculum program. Our funds for the main parts of this particular project come from the old Bureau of Health Manpower Education now called the Bureau of Health Resources Development (BHRD) at NIH. We have always worked directly with Dr. Gunnar Sydow, Director, Division of Health Resources Development, DHEW, Denver. The State Department of Health of South Dakota puts money into the project as do Comprehensive Health Planning and the Regional Medical Program, but the two major sources of funding are the Bureau of Health Resources and the Regional Medical Program.

Another thing that we are doing at this time is conducting a study on health manpower in the state and assessing the needs, the resources, and the services. No one has really ascertained where the needs are, yet we are all training new people and starting new programs.

In the fall of 1972, we went to the Governor's office to talk to him and ask if we could have

an individual from his office who had been involved with us in core curriculum projects. The Governor's office agreed that he could work with us on the project as long as he would be available to do certain things within his other duties. Thus, Dr. Wayne Gildseth came on board with us and last summer we made him the Associate Director of the project. He is responsible for the major portion of the progress that has been made today.

At this time in South Dakota we have approximately 87 health manpower training/education programs. The 87 programs that I mentioned here do not include the college preparatory programs for medical education in pre-medicine, pre-dentistry, pre-optometry, pre-veterinary medicine, etc., or the four-year school of medicine that we have now. However, the medical school is represented in our project. Each and every one of the 87 health manpower programs is involved in the core curriculum project. These programs exist in 31 institutions in the state that prepare health manpower personnel. We say that an institution is any facility offering an accredited health manpower training education program. They are located in vocational/technical schools, hospital-based programs, two- and four-year colleges and universities, and proprietary schools. We have 14 colleges in our state and for some reason two of them don't have any health programs, but next week they probably will ask for one!

Just two weeks ago the state legislature passed legislation which approved and funded a four-year degree-granting medical school. Many of us felt that this was long overdue and we feel now that the medical school could serve as the major resource for continuing health education across the state.

We feel that it is unnecessary to have the duplication that is offered in many programs—that, wherever possible, the community educational and health resources should be shared and state-wide planning by health education leaders should be encouraged. I think what needs to be done is for each of you to get together with the people in your state who make the decisions in health—not just in health education but in health services, health planning, and in implementation of programs. In most places these individuals are the state health officer (the Secretary of Health, Commissioner, or whatever you call him), the Comprehensive Health Planning Agency, and the Regional Medical Programs which could be a great resource for all health education across the country.

Another thing that we found early in the project was that you have to get involved with the leaders in education. In addition to each of the health manpower training and education programs in the state, we brought in people from all of the health professional organizations and got them involved in the project. It is easier to have them involved and working with you than to try to present it to them later. We also made sure that we had representation from the State Board of Regents, the state legislature, the Governor's office, the university systems, and the people who make the decisions in vocational education.

Now to the purpose of the project itself. The major goal or objective of the core curriculum project is to design a single or multi-facted core of educational material which will serve as many of the health educational programs in South Dakota as possible. Based upon this core, it is further desired to provide opportunities for lateral and vertical mobility for the students. Side issues that are involved in the project include the transfer of credits and/or experience, challenge examination possibilities, standardized performance examinations, the development of educational materials, and continuing education possibilities. In general, the core project is concerned with health manpower training, recruitment, and distribution. However, the development of the core and related activities has been done in full cooperation with the health manpower training/education programs in the state and with the health manpower task force composed of

the people that I mentioned earlier who are representative of all the health manpower training/education programs as well as organizations, agencies, professional and student associations also involved with health. In fact, we're so liberal, if someone thinks they ought to be involved we say, "Fine, come and join us."

The rationale behind initiating the cooperative relationship between the UCLA and the South Dakota core projects was that, after a review of the literature and especially after visiting the UCLA people, it became apparent the UCLA Allied Health Professions Project was actually doing more than anyone else we knew about in developing task inventories of what each health worker would be expected to do on the job. We also agreed that before we would develop the core curriculum, it must be clear to the instructors involved what the individual would be expected to do once he was on the job. We thought the curriculum could be designed to teach the knowledge and skills required to perform the tasks on that job. So I guess it was rather a natural thing that the two projects would get together.

In South Dakota, we had a major 3-day workshop back in September, 1972. We had over 100 people in attendance, most of whom were health educators. We limited attendance to one representative for each of the health manpower training programs because we just couldn't handle anything larger. We also had representatives from all the agencies that had anything to do with health in the state plus people from some of the federal offices. Miles Anderson, Tom Freeland, Lucy Wood, and Howard Taub, of the UCLA Allied Health Professions Project, came out and conducted a very successful workshop entitled "The Principles of the Task Oriented Approach to Health Occupation Curriculum Construction." This workshop was actually devoted to the preparation of task analysis, performance objectives, and task oriented instruction. The task analyses of medical laboratory and nursing practice for South Dakota were completed at that workshop.

I feel that the most important thing to come out of the workshop was the opportunity for all these people to come together, to meet, to get to know one another, and to really find out that we were sincere in saying that we were going to develop something like the core curriculum.

In May, 1973, we held another three-day workshop, again in the Black Hills in South Dakota (we purposely take people to an isolated area). Again, we had Lucy, Tom, and Howard as well as Jerry Epstein who conducted a second very successful workshop on the development of the potential entry level statewide core content for the health related occupations. The potential entry level, or as we call it now, the primary core content, was developed; tasks, skills, concepts, and other related knowledge which are of potential importance for a health core curriculum were isolated and identified by the participants in the workshop. Generalized topical outlines for 22 separate traditional academic course areas had been prepared, and they have been and are being used in developing the complete health core curriculum at this time. From these two major workshops and other interactions with UCLA Allied Health Professions Project, it is evident that they have played a significant role in assisting South Dakota in developing the core curriculum project. Dr. Miles Anderson has been an advisor to us, as well as a friend. Lucy's textbooks are used in all of the nursing schools in the state.

The progress of the project, the actual development of the core curricula for the health manpower training/education programs in South Dakota, began with the earlier workshops that I mentioned, especially with the one this past May during which the potential core content items and the tasks, skills, concepts, and attitudes were identified. The results of this workshop were then reviewed and

modified during a series of five sub-committee workshops which we have held. These workshops were composed of people who represent the various health manpower training/education programs (the 87) that are members of the state-wide Health Manpower Task Force. In addition, if need be, we brought in outside resource people, e.g., chemists. The core development is done by the people who are currently teaching chemistry to the health related occupations on one of the campuses as well as health occupations educators. We don't bring them all in from one campus; we mix the people up from various places.

At sub-committee workshop no. 1, which we held in August, 1973, the primary core was defined and topical outlines containing tasks, skills, knowledge, and attitudes were developed as the primary core.

In phase two, two more sub-committee workshops were held in October and December of 1973. During these workshops, the secondary core was defined. Topical outlines representing the tasks, skills, knowledge, and attitudes desired in each of the six academic areas called the secondary core were developed. The major areas identified were anatomy and physiology, chemistry, interpersonal relationships (for which it was found to be extremely difficult to write behavioral objectives), microbiology, nutrition, and public health and health care delivery.

Phase three took longer to complete. In November, 1973, we felt that we needed a little more help so we worked with Howard Taub and Jerry Epstein at Los Angeles and hired them to translate the topical outlines representing the primary core into measurable objectives. In January, 1974, we again went out to Los Angeles to meet with Jerry and Howard, and this time we discussed with them a process of translating the secondary core topical outlines into measurable objectives via the sub-committee workshops because this is what Wayne and I thought we wanted to do, but we wanted to test our idea on someone else. We have been very pleased with what has developed since then. Sub-committee workshops were held the last week of January, and again this past weekend we had a three-day workshop at which time the primary core measurable objectives constructed by Jerry and Howard were evaluated and revised as necessary. Also, the secondary topical outlines were translated into measurable objectives. We are not finished with these tasks yet, but we will be sometime this summer.

In phase four, we plan to have all the health manpower training/education programs and their parent institutions review and comment upon the measurable objectives and the core curriculum concepts thus far developed. During this review process, which will probably take place in March and April (1974), we will be asking each program to evaluate each measurable objective with respect to its degree of importance to that particular program or to any programs within their institution. Then, if necessary, we plan to hold a one-day meeting with the institutional contact persons to insure that the review process will be essentially the same for all programs and all institutions in the state.

In phase five, after the review process is completed and any necessary modifications have been made, each program will be asked whether they will adopt or reject the primary core measurable objectives as minimal objectives and which of the secondary core measurable objectives they will accept as minimal objectives.

Beyond the development of the core curriculum itself we know it is going to be necessary to consider the professional courses, career ladder alternatives, and the acquisition and development of instructional materials and standardized challenge examinations. Already this year we have had work done on the professional courses and the career model alternatives in the clinical laboratory program

areas. Then, starting on June 1st, we are going to do the same thing with nursing. The future emphasis of the Core Curriculum Project staff will be on the acquisition and development of instructional materials and standardized examinations as well as the development of professional courses. We will also consider career alternatives for health programs, and career ladder development will be considered by all health occupations where the ladder is applicable.

In South Dakota, work will continue on strengthening the role of the Health Manpower Task Force to include the assessment of health manpower needs and resources and the resultant advisory role that it plays in South Dakota on matters involving health manpower training, distribution, and recruitment. We also have some rather unique things in our state such as the fact that the Regional Medical Program has been involved in this program since its inception and is developing a state-wide continuing and special health education network. Eventually we hope to have one representative from each of the health professions on a large committee to plan together what is needed. If they will work together, then the Regional Medical Program will continue to fund the committee.

We have published some of the findings of the project already, but we have not put them out for general distribution. The proceedings of the last two sub-committee workshops will not be published until they have gone to the individual programs and institutions for their revision. When this report comes out, it will contain the behavioral objectives for each topic that is to be covered in that particular course. That is going to take a while, but I'm confident that we will do it.

The streamlining of the educational curriculum eliminates repetitious training, time consuming courses which are unnecessary, and the frustration of the student who is ultimately faced with these problems.

It should be emphasized that the intent of the Core Project is not to make all training institutions and faculty teach identical content. Granted, similar programs will have similar curricula, but it is believed that the Core Curriculum and Career Ladder concept can be implemented with adequate program flexibility and room for creative innovations to enable different educational philosophies to coexist. Also, no training program is obligated to accept all or any part of the Core Project results. Instead, the premise is that if the results are justifiable, the programs will wish to adopt them, and so far this has proven true.

Throughout the duration of the project, considerable emphasis has been placed on communication and cooperation with programs and groups of overlapping interests, but after diverse viewpoints, it is believed that this opportunity for large-scale involvement of individuals and groups has resulted in greater visibility of and support for the Core Project and its approach.

The support of South Dakota's Department of Health, Comprehensive Health Planning, Regional Medical Program and the Division of Allied Health Manpower of the Bureau of Health Resources Development has been extremely critical and necessary to the success of the Core Project.

Finally, the Core Project staff is optimistic regarding the future. Lines of communication have been established; cooperation with agencies, organizations, association and training programs has been excellent; core curriculum development will soon be completed; implementation of the core will take place this fall; and excitement is in the air!

MY HOPES AND FEARS FOR HEALTH OCCUPATIONS EDUCATION

Helen K. Powers, M.S., R.N.

I am most grateful to my good friends from the University of California, especially Dr. Barlow and his project staff members, for inviting me to participate in this national invitational conference on Health Occupations Education. When Mel Barlow told me that I was to address this group at the luncheon meeting today, I wasn't quite sure what he wanted. But he did say in his letter, "Helen, I want you to tell us what your hopes and fears are." And I thought, "Well, my gracious. A completely subjective presentation on what my hopes and fears are for health occupations education! Does he really mean that?" But, he evidently did. So today you are going to hear what my hopes and fears are from my personal point of view rather than the objective point of view from which I have addressed the subject in the past.

I think my hopes outweigh my fears. I think the evidence given to us here by the UCLA project and the many other activities that were discussed by each distinguished member of this conference indicates that my hopes are well-grounded. Commendation is well merited by the UCLA project staff for undertaking the colossal job of analyzing some 31 occupations and preparing instructional materials for 18 of these. Until one has read the voluminous reports, records of committee and staff meetings, survey findings, evaluation and validation reports, instruction books, and a vast amount of descriptive and analytical material produced in the project, one has only a limited notion of the total work that went into the project.

I couldn't believe it really would be attempted by someone when we reviewed the project in the beginning. Prior to that project our studies were not of either one curriculum or of one occupational area, but usually of one tiny segment of that curriculum or that occupational area. Nobody really had ever attempted to take a laundry list of 31 occupations and look at them simultaneously in a critical, analytical way to come up with some answers to problems we had been coping with for decades in the health field. This extensive study has given us this kind of education for the first time. It is not, I hope, the end of the study on the occupations as a group. There are other occupations to be included, other problems to be dissolved, and validation and repetition of some of the work in this project that needs to be done. And I hope that there will be time, money, and interest on the part of not only UCLA but other universities and groups to continue this work.

Perhaps it is an understatement to say that the project has effected significant changes in health manpower training and utilization, but I believe that a great deal of what has happened in the health field today can be traced to many different projects and especially to this particular project. Several speakers have emphasized some project results that shed new light on abuses in worker utilization and job requirements in the health field today. Among these findings are: 1) the comprehensive analyses of selected health occupations; 2) the identification of skills common to several different occupations; and 3) the differentiation of roles where several levels of workers perform in one occupational area, e.g., nurse aide, RN, AND LRN.

My hat is off to Lucile Wood for taking a new look at the nursing cluster and finding some logical reason for dividing the groups as they were divided. But, more importantly, what she did was to show that these are similar in more ways than they are dissimilar, that levels perhaps are not as readily achieved as we thought they were going to be in the nursing field, and that another approach will have to be used sometimes.

While you have not yet discussed the secondary schools phase of the project, it is a pioneer research effort in motivating students through health occupations programs to explore multiple career choices and to acquire salable skills. At the same time, they are improving their achievement levels in schools and experiencing that individual personal development that we are always talking about in education. The addition of the secondary school project resulted in research and experimentation in an entirely new secondary health occupations curriculum, suited to the needs of disadvantaged youth in grades 10 through 12. These students are strongly motivated toward vocational preparation. To quote from the evaluation of this phase of the study (Dr. Fielstra's 1973 evaluation report), "The evidence seems unquestionably to indicate that an allied health curriculum in the secondary schools can produce commendable educational results."

My hopes for the total success of the allied health project, beginning in 1968, were well founded and have been more than generously fulfilled. I have some fears about the project, too! One time those fears concerned the magnitude of the undertaking. Usually, in the health field we studied one small part of a curriculum, rarely the whole program. In order to effect any major change, it seemed essential that the whole broad spectrum of health occupations should be brought into focus at the same time and scrutinized critically by the same researchers working in one project. This is what the team at UCLA undertook to do. Then there were some problems about funding, and there were concerns that, like so much other good research, the project would be completed and filed on the shelf to remain there gathering dust that might be disturbed occasionally by other researchers or a student seeking extra credits for outside reading! There was concern also that some parts of the project would not succeed.

But none of my fears survived. Instead, I have tremendous satisfaction in what was accomplished, and that satisfaction is shared by a lot of other people. One can only be pleased that materials prepared in the project have had such wide dissemination and utilization. The response of publishers and their interest in the project is most gratifying. Each of you present at this conference represents additional resources for spreading the word, experimenting further with some parts of the project, and even taking some of the next steps in areas such as core curriculum, career ladders, multiple career preparation, and the like.

After several days of being exposed to the sophisticated discussions of health occupations, research in health occupations and new career models, role 'differentiation, and task analysis that has taken place here, a newcomer to health occupations education may conclude that this field is far advanced in every aspect of the program. In fact, I began to glean that from some of the discussions and features here. I thought perhaps it was my duty to hasten to remind you that this is far from the truth. In fact, the state of the art, so to speak, is practically in its infancy. Let me review briefly some of the history in HOE development in order to set some of the participants on the right track with regard to some basic fundamentals of the program.

The 1956 Public Health amendments, for the first time, authorized federal funds to support "health occupations" education and officially delegated this responsibility to the Division of Vocational Education, U.S. Office of

Education. Thus, public education became involved in this area, and the term "health occupations" education was defined under the law to mean those occupations in the health field requiring preparation below the baccalaureate level. Health leaders were quite willing to allow the educational systems to train practical nurses and nurses' aides, but presented a nearly solid front in opposition to expansion of public education's efforts into other health occupations. Considerable resistance was exerted also against public education's involvement in post-secondary associate degree programs, in spite of the fact that precedent had been established in the early 1950's when federal/state vocational monies were used to support some of the first experimental two-year nursing programs.

After several years of persistent effort with USOE's National Advisory Committee on Health Occupations Education and with national organizations, regulatory bodies, and key leaders in health and education, roadblocks in these areas were removed. By 1961, little or no opposition to the development of short term and one-year programs was evident. However, it was not until 1967 that the U.S. Commissioner of Education invoked his authority under the Vocational Education Amendments of 1963 and made an administrative decision that the associate degree program in nursing could be supported with federal vocational education funds. Even as late as 1973, some groups are still challenging the legality of using public education funds in an associate degree program preparing health workers. Believe me, it is quite legal!

The 1960's saw rapid growth of school-based health occupations programs financed with public education funds. From a national enrollment figure of some 10,000 HOE students in the early 1950's, this figure increased to nearly 270,000 in 1971 with expenditures of federal/state/local funds for HOE exceeding 120 million dollars annually.

Some of the other changes that to me highlight the 1960's include the tremendous push to get good facilities for occupational training, i.e., vocational and technical schools. We started the experimentation of secondary HOE programs during the 1960's but they didn't make much progress in terms of the quality of the programs that we are talking about here this week. Perhaps the most important development in the 1960's was the centralizing or departmentalizing of the health occupations education programs within a school. Some of you do not realize that prior to 1961 there was not one single school in this country where two health occupations were housed together and operated as a unit. Every single training program was a separate entity that operated under its own rules and its own faculty. In other words, we used to hold workshops on self-contained curricula.

In 1961, we discovered a school in Massachusetts that had decided it would centralize. The advantages of such departmentalizations were quite evident so we funded a workshop to get a lot of people to Boston and we invited not only vocational educators but health field leaders. We were all very excited because we were learning a tremendous number of things about how to operate that occupations education program, about its management, about commonality in curricula, about the interrelationships of teachers and the interchange of courses and teachers in the schools.

Someone expressed surprise that registered nursing programs have not joined the allied health schools or departments but remain as independent schools or departments in schools. Prior to 1962, all health occupations curricula were conducted independently of each other. There was practically no coordination between these programs even if located in the same school. In fact, for a period of time in the 1960's, state and national accrediting bodies forbade the operation of an RN school and an LPN school in the same

facilities unless they were completely separate entities. In light of this experience just a decade ago, one does not expect to find the trend toward total departmentalizing of HOE programs fully implemented. I think for the long run and in the interest of producing the numbers and quality of people that we need, most programs should departmentalize. I think it is in the best interest of the student.

The 1970's so far have given us quite a few landmark achievements. We have had greatly increased collaboration between education and the health field. (I can only measure this by the increasing incidence of conferences at which one finds in attendance a broad representation from both fields. Educators are no longer talking just with each other!) The UCLA Allied Health Professions Project completed its major objectives and has provided health occupations educators with much needed instructional materials and guides. Student organizations at the State level primarily serving HOE students have begun to emerge with four States reporting active organizations—Texas, Alabama, New Jersey, and Indiana. A climate for change is making possible the revision of outmoded processes in the education and credentialling of health occupations students.

We've looked at a quarter of a century of health occupations education, and we have seen how it moved from its rather lowly place in the educational structure to the verge of becoming a viable system for the 21st century. Not quite, but almost! There is not much time left to develop that system to fit into the needs of the next century, in my opinion. We must get on with the job quickly.

Galsworthy said that, "If you do not think about the future, you cannot have one." Believe me, I *have* been thinking about *my* future. What about you? How do you see yourself in the year 2000?

The future of HOE is certainly assured, I believe, because there is always a need for health services wherever there are people. Production industries, on the other hand, may close the plant, move to another state, or temporarily suspend operations, thus eliminating many jobs by one single decision. But there are always going to be sick people, and the health needs of the people and the jobs that are dependent upon those needs are always there. Another factor, absent from the health manpower field since the early 1940's, is that of open market competition. Unless sufficient numbers of workers are prepared to effect such competition for jobs, the employer has little choice but to retain those workers who consistently turn in poor job performances and who are a threat to patient welfare and to their co-workers' job satisfaction.

Recently there has been very little evidence of new jobs being created in the health field. By contrast, the 1960's brought many new types of health technicians and fragmentation of previous jobs to establish several levels of workers within one occupation. A few years ago, there was grave concern over the rapid proliferation of new job titles with the result that health leaders called for a temporary halt. I readily agreed with this position provided a job analysis was done to establish the exact nature of the new functions to be performed and to determine which category of worker would be taught to assume these new tasks.

In view of changes already occurring in the health delivery system, with great emphasis being placed on health maintenance and protection, I have some concern about the reversal of the trend toward the development of new jobs and new job titles. Some of us may recall our nursing history and the early beginning of the practical nurse who was considered to be a household worker, not a health worker. Other disciplines took responsibility for this person's training, if any. Another case in point is the child care assistant of today. Some states hold that this is a health occupation, others that it is just another household worker. However, these individuals are working in hospitals, child care institutions, and

with groups of sick and handicapped children in many settings. Is this another example of the resistance to new health worker titles and an oversight by health occupations educators? Perhaps South Dakota's approach to core curriculum can help us more quickly resolve such questions in the future and meet the challenge of new and emerging occupations relating to the family care concept, to new types of independent health practitioners, and to health maintenance complexes.

The greatest expansion of health industry workers in the next twenty-five years will not be the simple multiplication of numbers in the existing 150 or so health occupations. As the emphasis shifts from crisis medicine to health maintenance, as it surely will within the next decade, growing numbers of technicians will be needed whose jobs involve repetitious tasks in the screening of well persons making regular visits to their Health Clinic. (Notice I said, well persons, not patients!) These workers will face many of the same problems of boredom and fatigue that factory workers today face. Their education and the job they perform must be made meaningful, and the trainee must develop an understanding of the importance of his work if he or she is to be able to provide high quality services as needed and function at an optimum level of competency.

I've talked about a lot of years and said very little about my hopes except to generalize. But my hopes are very great. Essentially I hope that you and I and our peers in HOE continue to place the student and his needs in a focal position in our educational programs. The health delivery system must be responsible for placing and keeping the consumer of health services in the center of its operation, making sure that education and schools exist for the learner.

I hope that we, as part of the educational and scientific estate, will develop ever greater awareness of the power we possess to influence the public, employers, and our fellow members of that estate, for the good of students and of Health Occupations Education. Although we do not control the supply of talent that is required by the health industry, nevertheless, vast numbers of that supply pass through the programs over which we do have some influence. We can and do indoctrinate these students, for better or worse, and the industry depends on us for this supply of talent. Through the product of the program, you can be and are being heard.

I hope that HOE teachers will continue to take an active role in standard-setting at all levels for all personnel serving the health field. No one is better qualified to participate in developing new methods of credentialling and verifying competencies for various health occupations. We cannot leave this to the employers, or to the professions, or to the universities alone. All levels of education, the public, and all health disciplines need to be involved together for the best interests of the consumer and of the worker. I've gone through the period of time when I've been told at meetings that vocational education did not need to come to this meeting because "policy decisions will be here. When we get through with the decisions we will let you know what they are." I don't intend to stand still for this and I hope you don't either. Keep on playing that very active role in standard setting; continue your strong and dedicated leadership.

Also, I trust that the federal agency, the U.S. Office of Education, will continue to place high priority on this field by providing adequate full-time staff and funds to carry out its management functions as defined under federal regulations. Without such designated officials in USOE, coordination between federal education agencies, federal health and health manpower agencies, and others concerned in health manpower development will diminish or cease entirely.

I would hope that centers conducting research and development activities, similar to those described by the UCLA team, would become a

permanent part of HOE for the purposes of conducting research in this area, where experimentation, demonstrations, and dissemination activities would concentrate on the problem in HOE. While it is true that we already have a network for curriculum coordination in Vocational Technical Education now operating in seven states (Oklahoma, New Jersey, Washington, California, Mississippi, Kentucky, and Illinois) which serve the essential functions with regard to curriculum development—dissemination, utilization, and evaluation—there is a critical need now for basic and practical research in almost all aspects of HOE. I do not see the curriculum centers fulfilling that need, but they can extend the work of HOE Research and Development Centers.

My last and most burning hope is that our dilemma in teacher education will be resolved. We have a number of teacher educators here and I commend you for the progress that you have made in getting on top of these problems. I have strong feelings yet about the selection of teachers who are competent to teach their subject matter, and who can be effective with their students. Teacher education for health occupations teachers has been too long neglected in most states. In reviewing some 1974 State Plans recently, I was again shocked at the limited accomplishments in establishing identifiable HOE teacher education within the university system and at the limited dollars assigned to it. One would assume that HOE teachers need little or no preparation for the job and that they are not interested in pursuing further preparation. I believe the opposite is true. I hope to see the splendid efforts of several universities represented here continue and expand, and I hope other states will recognize this oversight and correct it. With the secondary school programs expanding rapidly, and the role of post-secondary teachers expanding to meet the challenge of new curricula and new educational approaches, this situation must be corrected or the programs will encounter insurmountable problems.

But we also must have leaders developed who can communicate the concerns of this field of education. It is not enough just to be a good teacher and to produce good teachers. Teachers must go on to become good leaders who can represent us in all levels of discussions in the education field, in the health field, in government, and wherever else they may be needed.

My hopes and fears are in the best hands in the world—yours, representatives from the leadership in the field of health occupations education and in the health field. I have great confidence in what you will do about these and about other problems as they come down the road. You have already demonstrated your concern and I hope that you aren't going to let someone else shoulder the responsibility for you. Your involvement in solving problems that you and others have identified is quite evident and I think we are close to the solution of many of the problems that have faced us over the years. After attending this meeting and participating with many of you, I think I can leave my fears behind and I will depart this conference with great hopes for a better future in health and in health education.

HOW TO GET A NEW HEALTH OCCUPATIONS EDUCATION PROGRAM STARTED

Ellen M. Abbott, M.S., R.N.

It seems that most of you are interested in starting a program at a high school or pre-high school level rather than at a post-secondary level. Perhaps it would be best if I were to list some of the programs we offer, specifically those some of you have asked about at this conference. And I think, too, it might be best if I explain a little about the district in which I work.

In 1956, I started the first nurse aide program in the district because I discovered there were no nurse aide programs in the entire San Diego County. So I asked if I, as a volunteer, could conduct a nurse aide program. We started out with twenty-seven people and devised a 50-hour, on-the-job program. From that we wrote the first course outline to be introduced in California. In 1957, we started a vocational nurse program, and in 1960, I became director of that program. Then, in 1961, a community college came into the district. It was the decision of the college that only two-year programs would be offered there, and the other programs (the vocational programs) would be in an adult high school environment. In the Grossmont area there is an adult and post-secondary program. All vocational education programs in this district are under this set-up, with the technical programs, including the two-year programs, at the college.

We started by adding one new program a year. The first one was an RN refresher course, then we added OR technique, then OB technique. As a consequence, we now have 15 full-time programs in health occupations and quite a few extension programs. Some of them are of short duration and some are on a continuing basis.

Then we began to have difficulty with the articulation of students into the two-year RN program. We met with the nursing board and started a one-year RN program for LVN's. Those who wish to continue in nursing education articulate into the baccalaureate program at California State University, San Diego, as space permits.

In starting a new program, you have to know your community and you must have a concept, i.e., what you think you would like to have in your program. My concern for the ten high schools in the Grossmont district was that there were no occupational programs for girls. There was carpentry, auto mechanics, etc., for the boys, but the girls were usually excluded from every one of these areas. Each high school had typing classes and a business program, but each was fairly small at that time and restricted to 50 percent girls. There was nothing exclusively for them. Seven months of meeting with counselors finally paid off, but even then, of the ten high schools, only two principals would endorse the program allowing their students to go into a nurse aide program. Now it is such a large program we have approximately 170 students involved in it annually.

In developing program content, you may have to innovate to accommodate changing course contents based on hospital or health community facilities as well as keeping in mind individual learning rates, styles, and motivations.

In other words, to shift the responsibility of learning from the teacher to the student, there must be a student-oriented curriculum regardless of the programs you are going to start. But more than providing a direction, health occupations education offers a systematic approach to learning. And this is part of your selling job wherever you are going to initiate high school health occupations programs. (If anyone is interested in starting a high school program, please contact me and I will send you data we have prepared.)

We offer one program in paramedics open to returning servicemen who have been in the Medical Corps for twelve months or more and qualify to apply for vocational nurse licensure. If they had twelve months in a nursing related assignment or twenty-three months in a health occupations area, they are eligible for this program. Most of the applicants are male. When the young men started coming to us for supportive education or guidance to successfully take the LVN exam, we discovered that the military was not informing them of their opportunity to take the State Board for Vocational Nursing or the Registered Nurse exam. In California, any person who has had twelve months of nursing or twenty-three months experience in a medical corps may take the LVN licensing exam; or, if he has had forty-eight months experience, he may take the RN licensing exam. When they applied to one of our programs, I found they were not aware of this information. So I went to the Board to ask about the successes of the young men and discovered that only twenty percent who did take the test failed.

We wrote to the military services and asked for their basic course outline. They sent all the educational material for their basic school. We evaluated that material and ran a couple of stories in the paper. When the young men came in, we discussed their education, gave them a few comprehensive tests, and tried to determine what type of background they had. We decided that most of the people who failed the exams did so because they did not have the theoretical background nor the transitional experience from military to civilian hospital. Additionally, some young men had difficulty adjusting to working in a woman-oriented situation.

We have tried to present a curriculum to meet their individual needs or deficiencies for successful job placement. We wrote our entire course outline on this type of approach: 1) to meet their educational needs so that they can successfully pass their Boards; 2) to prepare them for the licensed level of nursing at which they can function; and 3) to give them the knowledge base they need to continue their education. We designed the course curriculum based on the tasks and knowledge they would need on the job. Next we talked to the young men asking them in what hospital areas they thought they would like to work. I then did a task analysis of RN's/LVN's on the job to determine what they would be doing. We included related theory because we felt that, first of all, they had to pass the Board exams, and, second, they had to continually grow in their jobs. There have not been any failures on the State Boards among the program graduates.

The program is federally funded, and the young men and women receive a $59 weekly stipend as part of the project. They also use the GI bill if they wish and receive $2.50 per week for transportation plus all books and their uniforms. If they leave before we think they are ready to go, we take the uniforms and books back. But if they stay as long as it is determined a need exists, they can take those items with them.

Another program we started recently is Medical Transcription Specialist based on the same format of our Medical Office Assisting program. In a neighboring school district there has been a medical assistant program for years. A few years ago I spent some time analyzing the program trying to decide why it took two years to train someone in medical assisting. In

looking at their program, I felt it did not have to take that long. Thus, in our medical assisting program, the students attend one semester for course content and then attend skills lab on a contractual basis while they work five days a week. They can attend our labs as long as they feel they need it. When they are ready for certain areas, they check out cassettes or meet with the instructor for assistance.

Our Medical Transcriptionist program is offered in the same format. To get the program started, we hired the best medical transcriptionist in the city, right out of the hospital setting, and paid her to write the course. (I did not know that Miles Anderson and his group were doing the same thing just one-hundred and twenty miles away!) She has written the curriculum as she has performed on-the-job, with all dictation for student practice dictated specially from medical charts or taken from actual dictation hospitals send us. Occasionally we choose doctors who mumble and grumble a lot and that is the kind of dictation practice the students need.

We also started a program for Medical Clerks. The course for high school medical clerks in fact encompasses all hospital clerical jobs. The students rotate to every department of the hospital, but it is a low paying job. We wrote the course curriculum by studying the clerical tasks nurses were performing that we felt clerks could do and incorporated these tasks in the core curriculum. Then we gained permission for our students to be assigned the tasks at ward stations (for experience, please). At first the staff offered a great deal of resistance, but now ward clerks are accepted throughout the hospital. Nurses are no longer recording and doing the clerical chores they were formerly performing.

So how do you get a program started? How do you get the money? I think California is unique in that we have funds (ADA—average daily attendance) based on students' daily attendance with monies paid proportionately to the school district from state funds to meet basic program costs. What it really takes is someone to get out and look at the possibilities for programs and see the need. Then meet with the personnel in the hospital or facility in which you feel you can place the program. If you need equipment, look at the facility where the students will affiliate and usually your students' use of the equipment available will meet curriculum needs.

It is also good to have an advisory committee as an initial activity when considering new programs. I have found that the "retired" health community, such as doctors and dentists, have more knowledge of what is going on because they have a different perspective now. And also they have time to devote to program planning and assisting with raising monies for capital outlay, equipment, etc. I have a rule that no advisory board be larger than six members because that way they know you better, you know them better, and they are willing to come in and meet with you a little more often.

I have one more statement to make and that is about attitudes. We are interested in the attitudes of students and in the attitudes of the teacher. This, more than anything else, is the basis of the success of a program. I assume that any person who comes to me for a teaching job has all the tools he needs to do the job. I ask him to give me the names of two people with whom he has worked. I don't want to know the supervisor; I want to know the people who work with him side by side. I don't ask about past experience or how long; I don't think that one year, three years, or twelve years is that important. Before I talk to these two co-workers, I study the applicant's resume. If it meets the requirements, we set up an interview appointment. In the meantime, I talk to the two references (usually I call them on the phone). I ask them four or five questions that are routine. I listen to the voice, and you can tell when someone is giving you a good recommendation and whether they genuinely believe it. If they are enthusiastic, I

invite the applicant in for a two-hour interview. We talk about anything; horses, flying, hobbies I like, or hobbies he likes (he talks about mine as much as his). If, at the end of two hours I like him and I think that he likes me, he is hired. That's my technique for hiring teachers. And I think that it has been successful. People think I'm crazy, but it really works. Attitude is important in determining the quality of work you do.

When you start a program you have to analyze the health manpower needs data that is available. Sometimes this means meeting with the people in the institution or agency, sometimes it means looking at printed data, sometimes it is looking at UCLA and what they have done. Seek whatever is available.

Occasionally we have to convince a hospital that they need a new program. Sometimes we have to convince the advisory committee that a need exists. When we first started the high school Orderly program in the evenings, the president of my advisory committee was the administrator of the only licensed accredited geriatric hospital in California at the time. Oh, how he opposed that program. He did not want it because he had no budget to hire personnel. So we finally got approval—it passed one day when he did not come to a meeting. You have to go around in your community to meet people, to talk to them, because you have to get into the institutions. Your advisory committee members are the people who help the most here. The one rule is never to have more than one person from one institution because you need cross-fire.

Adjoining our school district is Mountain Empire School District. It has no doctors, no hospitals, no public health nurse, and yet we have four programs in the district. We rented a big trailer to use there. We pull the trailer into the townships for the educational phase of the program, the students get their training in hospitals on Saturday, and we take the trailer back on Monday. It is an old thing that barely works and we have a volunteer who tows it. So you *can* do it!

THE UCLA SECONDARY SCHOOLS PILOT AND DEMONSTRATION PROJECT FOR AN INTRODUCTION TO ALLIED HEALTH CAREERS

Diane E. Watson, M.S.

UCLA's Allied Health Professions Project was charged with adding another component to what they were already doing, and that was to develop a secondary school program that would introduce high school students to allied health occupations and also to develop a curriculum that would accomplish that goal. We began by researching the literature. We searched school libraries, hospital libraries, etc., and found nothing that we thought would serve the purpose. So before Dr. Barlow, the principal investigator, would accept the money for the project he asked for a year to do planning. "We need to think this thing through, to talk to people, and we need to find out what it is all about," he said. Many interesting and stimulating things occurred in that year along with some very serious problems. As a result of that year's experience, we can't tell you much about what to do, but we can tell you plenty about what not to do!

We came up with a program that we titled "Careers in Health Services" because of the emphasis at that time on career education. The secondary school allied health program was a three phase program. The first phase corresponded to grade ten with fifteen year old students. In this phase, they were given an introduction to the field of health, i.e., what it is all about, curriculum, and field experiences. The second phase, or grade eleven, was Work Experience, and the third year was a cooperative education program.

The year prior to implementing the program was spent planning. We had to select staff. What kind of people should be involved in developing and implementing the program? Certainly we needed teachers and someone to coordinate activities with the community. We felt that if this was going to be a successful program, we needed to have someone who was free from the structure of the school setting, who could work with hospitals and other health facilities at any time during the day. So we added a field coordinator who was part of the team working closely with a classroom teacher. Of course, there were clerical personnel and administrators.

Then began the search for a complex which included a high school, a neighboring community college, and a hospital in close proximity to the high school. Each facility was contacted, procured, and oriented to our project.

Now, this was not an easy task; we had to sell this program to the schools. They thought, "Why should we confuse the issue by bringing in another health program? We have always had health occupations in the schools. After all, we have nurse's training." We tried to convince them that we were not training only nurses; we wanted to train youngsters in a generalized orientation to health care so that eventually they could select an occupation of their choice. It was hoped they would recognize the fact that there were other occupations composing the health care system besides nursing. Finally the program was accepted because we were going to provide 100% of the financing.

The next big move was to convince hospitals that a fifteen year old student did have a place

there. They questioned what a fifteen year older really could do, "besides running all around here getting in our way." We reasoned with them by pointing out nurse aide tasks such as answering the telephone and reading to a patient that could be efficiently performed by students.

Getting facility approval was the first step. Once we secured the hospitals, they wanted to know who was going to be responsible for these young people. It was explained that the hospital, medical facility, or wherever the students were working, was an extension of the classroom and whatever insurance covered the student in the classroom would cover them in the hospital. We also set up a supervisory system so that any time a student was on the premises there would be a supervisor there also.

The second step was to contact supervisors and sell them on the fact that they would have more people in their department to supervise. The third step was to ask the actual workers if they would like to have a student working with them. The typical responses were, "My day is already too full." "There are too many demands." "How in the world can I take time out to teach a student?" And we said, "Don't worry about teaching the student. Go about your tasks the best you can and have the student observe you. After observing a few times, explain to him what you are doing. After he has heard the explanation a few times, let him work with you. If he does a good enough job, let him do that particular task." In this way, they were oriented to how they could work with students.

Then we realized we needed to have a summer hospital internship for teachers and students. Four students were selected that we felt could help us develop curriculum. We didn't know how to select teachers but we thought we might need someone with a nursing background. (If you were in the workshop that I was in yesterday, you know that I am not against nurses, but we found that the nurse as a classroom instructor in allied health occupations tended to want to teach only nursing tasks and to go into more depth in that area than was needed in an experiential, exploratory program.) We tried to overcome this problem but had difficulty all the way because we found that nurses are so well trained they seem to want to duplicate their training in the classroom. We did find some nurses we thought could be more flexible. You have to have a special kind of nurse who can transcend her training and be the kind of instructor who can relate to the youngsters who want to go into pharmacy, the medical laboratory, or some field other than nursing.

Our idea was to have our teachers come in during the summer for a ten-week internship where they would rotate through the various departments in the hospital and actually do the tasks that are done in each department. We thought that if they were outside the field of health, they certainly needed to know what a hospital was all about, who the people were that worked there, and what they did. Well, that internship failed miserably. We paid teachers their regular salary for the ten weeks. We thought we could bring them into the project office in the morning and have them in the hospitals in the afternoon. It was a failure because we found that you cannot work teachers during the summer at the same rate and pace you worked them during the school year and expect them to produce because they are tired. Secondly, many of our teachers felt that the tasks they were asked to perform were below their professional status, and they rebelled against the department. We also tried to give them segments of curriculum to develop and that was no good either; they would rather see the whole thing than just pieces. We did not have a concept that was comprehensive enough. So we learned through trial and error and it was a very costly kind of thing, as Miles Anderson will tell you. But we had to go through this procedure to find out what to do.

Two weeks before starting the program we found that we were losing three of our four teachers. So there we were with only one teacher and our program starting in two weeks. We had to go out and beat the bushes. We hired a young lady right out of college who had a health science background. We were able to hold onto a science teacher. We hired a person who was director of nurses from Job Corps and a science teacher who had taught one week in a high school. We had to put our faith in these people because we had no other choice. But you know, it worked out alright because these people had no preconceived ideas. They had not been molded into a structure that would restrict them; they were flexible because they had little experience.

They came to the project office in the morning, we gave them the lesson plan for that day, demonstrated its use, and then they would implement the lesson that afternoon. This was tremendous for curriculum development because if we, from our ivory towers, developed something that we thought was great and it did not go over in the classroom, the teacher would tell us the next morning and it went immediately into the trash can. But what we did come up with was a product that was very relevant, effective, and it worked. We trained teachers right on the spot, and, believe me, it was difficult because we had to start from the beginning.

We tried to get input from the students on curriculum but found it was too difficult a task for them. We learned that the best way to use the students at that particular level was to let them observe and give their input if they chose. But we could not expect them to get actively involved because they did not feel comfortable around instructional staff. When we were in a big circle, looking eye to eye, they would not say a word. However, they would talk to the individual teachers in their schools and they built up a very close relationship with them; but they would not relate to them in a group. They were never critical because as instructors we always have a way of getting back at students, don't we? We can grade them from A to F, which they know, so they don't go too far out on a limb. We really wanted them to be open and honest, but they couldn't be. So they acted as observers with the knowledge that they could give input at any time.

The next process was recruiting students. We wanted 100 students and we wanted to keep our classes small so we decided on 25 per class. We also wanted to include as many boys as girls because health occupations have been a man's world. Most doctors are male; most engineering people are men; most maintenance people are men. So we wanted the youngsters to know that males were just as much a part of health occupations as females. What kind of student did we want? We did not want to close the door on any student who needed the program so we discarded all kinds of testing. We said, "Let's open the door to all students but let's place the responsibility on them."

So we held a general assembly and invited all the students in the ninth grade at the junior high schools which fed into our four experimental high schools. We announced that an exciting program awaited them at the high school level. There was a catchy little film and pop music to turn them on. And then one of our field coordinators who reflected the majority of the student population at that school would speak. If it was an all black school, we would send a black male there so that the boys would be able to identify with a successful male figure. If it was a Mexican-American school, we would send a Mexican-American female so that we could attract females into health occupations. These were really sharp people who did a tremendous job.

We gave the students an application form and looked to see if they wrote anything on the line that said, "Why do you want to become part of this allied health program?" If they did

not write on that line, we did not consider their application because it was felt that, if they were truly interested, they could at least write, "because I like people," or "because I want to help." That was good enough for us.

We had only 100 slots and we received over 900 applications from our four feeder junior high schools. The 900 applicants were divided into small groups of six to eight. We discovered that at the ninth grade level it was very difficult to find out about an individual student on a one-to-one basis. These kids do not relate that well to adults. We threw out a question to find out about Jimmy, and Johnny would answer. They would talk among themselves while we watched the interaction to decide which kids we wanted to interview further. From the group interview, we went to a one-to-one interview. Each interviewer had a check sheet on which to identify the enthusiastic students. They rapped with the students asking them questions about school. The students were rated along a continuum; those coming closest to the side marked "Potential" were considered for the program.

We also looked at the different levels of classroom makeup. We wanted 15-25% to be college bound and 60% average students, but our real focal group was the 15% of those students who were non-motivated, who had no plans for themselves, and who were potential dropouts. We felt that if we could develop a program that would keep this group in school, then we would have a program that would keep all our students interested.

We used an advisory committee that could give us real clout, and there were very few educators on it. We needed people from outside education, from hospitals, professional organizations, and industry, that could make an administrative decision. We needed to use their names to make things happen for us in the community. Then we had to solicit the cooperation of the school district, the health facility, and, of course, the community. The parents of our program students also played a large part.

In the schools, we worked with principals, vice-principals, counselors, teachers, students, and, naturally, the Board of Education. In the hospitals we worked with the counterparts of those listed above. We had difficulties in both camps. In the hospitals it was the nurses, and their counterparts were the counselors in schools. Why was there difficulty with the counselors? Number one, a high school counselor oftentimes functions as an advisor and doesn't do indepth counseling and guidance due to lack of time. And you are saying to them, "We want a program that will give a student options in case he chooses not to go to college." The counselors would say, "Oh my gosh, no. Everyone here is going to Standford, UCLA, or USC." And we said, "Well, the records show that 58% of your students drop out at the 11th grade." The statistics meant nothing to them because they had their own goals set for the students even though we would say, "Here is a program that can pick up these kids who feel they must drop out of school—that can train them and give them some direction in their lives." And you know, we fought that battle for three years and I really don't think we ever won it because all they saw in this program was that we were going to block these youngsters from going to college. They were told that these students could eventually move up to a professional level, but it was hard to convince them. They did not see how the students would have time to take all the academic courses that would prepare them for college and be in the allied health program, too.

In the hospitals, the nursing departments said to us, "Well, you know our first responsibility is to the patient." But the youngsters themselves won these people over. They sold the program by asking questions and offering to do tasks. That started opening doors for them.

The tenth year students began with an introductory course. We wanted these young people to have a different experience than they had ever had as a student before. We wanted youngsters, especially in the ghetto area, who were really turned on and motivated to attend school. So we said to the schools, "On day one, we're going to take the students out to where the action is." The administrators almost collapsed. They said, "You can't do it, firstly, because you can't get your hands on the warm bodies, and, secondly, we cannot provide you transportation because our buses have to take kids to and from school." We finally won when we told them we would pay for the buses and extra drivers.

The teachers were the ones who gave us the most opposition on this point. They did not want to work that hard the first two weeks. They won — when the youngsters came they weren't taken out that first week. Instead, we had a slide/tape presentation accompanied by pop music. The kids kept time with the music while slides were flashed on the screen. The slides covered both modern and historical health concepts. They were flashed on quickly because we wanted subliminal kind of conditioning; then they were presented again a little slower and then the third time they were used as discussion topics. It was really a fascinating experience because all their senses were involved, and it was their first time for this kind of curriculum.

No pencils and paper were used the first two weeks. We talked a little the first day about visiting a medical facility the next week. They were asked, "What do you think you should do?" "How do you think you should act?" "How should you dress?" We got all the input from them. The teacher would say, "Now, be at the bus on time," and "Maybe you should keep your voice down in the hospital. Why do you think you should keep it down?" "Why should you walk and not run?" These kinds of things were treated very superficially in the beginning because we did not want to have structure coming out of the kids' ears.

There was 100% attendance the second day of school. This was unbelievable! The school never had this happen before. Why did we have 100% attendance one day after summer vacation? Because our coordinators who had selected these kids had continued contact with them over the summer. They went to their homes, sent three different letters addressed in their names, wrote letters to the parents informing them that their child would be in the program, and we went out and talked to the parents to solicit their support and reinforcement of the program. So we literally pulled the students in, and when they came, they stayed.

In the tenth year, students were in class two hours per day plus an additional two hours a day for one month of work experience. They received ten units of credit for being in the allied health program. Counseling was done on an individual basis by teachers, coordinators, school counselors, and hospital supervisors. Students stayed in the program because they felt that adults were interested in them. It was a program that gave them a four-to-one contact ratio with adults. Also, parental conferences were maintained all the way through; we never neglected our parents.

The curriculum was divided into three units. The first was an orientation to the health care system; the second, and the real meat of the curriculum, took a case study approach; and the third unit was the health care complex, the actual on-the-job experience. At the end there was a culmination program put on by the students.

In the first unit, we spent six weeks taking youngsters to every kind of health care facility we could get into, including dental offices, mental health facilities, youth clinics, hospitals, and so on. They got a pretty good picture of what health care facilities are like. However, it wasn't just a pleasure cruise; they went with certain goals in mind. They were given a check sheet on which to record information. They had to talk to several people at the facility, find out their titles, identify uniforms, identify

terminology, observe functions and tasks, ask about training, salaries, personality, and attitudes. Before going on a trip they were given a check sheet and something specific to look for on their visit to the facility, and the information they brought back became the core of the next day's class activity.

After six or eight weeks the students progressed to unit two which took up about twenty weeks of the school semester. This unit was divided into eight sections. Since this was an exploratory program, we wanted the young people to get a feel for health care. We wanted them to have the essential knowledge and some related knowledge of the field of health care in order to be able to do simple entry level tasks. The essential information they should have was listed: the sciences, the terminology, the tasks, etc. Then we had to find a vehicle for teaching this information. We decided to use actual case studies, so we consulted hospitals to see if they had cases about young people with the specifics we were looking for.

Using these real case studies, we began with a Physical Examination. Every student was familiar with the physical examination process. However, we took all the students to the health office and they observed the school doctor and nurse perform a physical examination of a youngster. They were taught how to read the Snellen charts, how to take temperatures, etc. Then the nurse would teach one student, through demonstration, to do a task. That student would select another student and teach him how to do the task under the supervision of the nurse or the doctor. Next they paired off so that every youngster had the opportunity to perform the task. In this case study, the cardio-vascular system was the focus. In the classroom the students would study the functions of this system and how it had meaning for them.

Our next case was one of a broken leg. It was introduced as "A Case of a Broken Leg," but the students never used those terms again. Instead, they learned to refer to it as "a fracture of a tibia," and, boy, they loved learning the jargon! This is the way to present the terminology. The students not only hear the terms but learn to comprehend their meanings and they learn to use them. This case provided an opportunity to learn the muscular-skeletal system of the body. The teacher did not say to them, "Now you're going to learn all of the bones of the body." Instead, they learned about the case of a kid who, while running across the school grounds, fell and broke his leg. First aid was given (this is where we brought in first aid). There was a temporary splint applied. By this time the ambulance was on hand and the attendants took over from there. The kids got a chance to ride with the patient in the ambulance to the hospital, and this was great stuff! The ambulance came on the school grounds with sirens going and loaded a few students at a time. They rode in the ambulance to Emergency. There the students observed the nurse doing her duties; then they went with the patient to X-ray where they saw the people in radiology going about their work; then they went to the cast room; etc.

Our next case was that of an Appendectomy. This began as a young lady was going to the prom and fainted. Her boyfriend called for help and she was taken to the hospital where they found she had to have an appendectomy. This was where we got into the gastrointestinal system and saw the lab work being done and the people in the laboratory who do it.

Following that was a case of Food Poisoning and this was where we did a really interesting investigation of environmental health through the Public Health Department. We used a story from "Eleven Blue Men" that many of you are familiar with. It is about some Polish people who are having a picnic. They make sausage and because it smells so good, they eat some of the patties before they are cooked. Of course, you know what happened

after that. The students visited the Public Health Department and went on calls with the Public Health Investigators. The mechanics had all been worked out beforehand. We didn't call up on an emergency basis and ask, "Can we bring 25 kids over?" We worked this out prior to the beginning of the semester. We were then informed that, "On this particular day, this investigator will be doing this kind of investigation and if you want to bring the students over we will be happy to take them along."

We then got into Ecology and the Respiratory System. The students wrote a play, and it was this play that was used as motivation. They got all involved in playing the parts, and they started researching smog and other environmental problems. And then we got in a Tuberculosis case where sex education was presented. Sex education appeared throughout the curriculum, but it was emphasized here. Our philosophy was, if the need arises, deal with it at that time. We tried to train our teachers to be open and free with the youngsters, discussing whatever topics came forth in an intelligent manner. Discussions of all kinds were held with the students.

The last case was about Drug Abuse. This was where we presented the nervous system. I failed to mention, though, that before we started the case studies, we presented one of the most interesting sections of the curriculum which really held the kids—a unit on Quackery. In order for them to be knowledgeable consumers of the health care system, they should know what state health care is in. We introduced this by using a film from the "Hawaii Five-0" series. It told the story of a doctor who had invented a machine that would diagnose cancer from a drop of blood and provide the treatment. A couple of patients died, and the families brought a law suit against the doctor. We used this as a base point for quackery and, boy, did it take hold. The kids were bringing in all sorts of newspaper clippings and magazine articles. They really had their eyes and ears alert.

The first year curriculum included classroom time and field experience. The students spent a day in class and a day out. As the semester progressed, the curriculum became more difficult and more comprehensive but they were ready to accept it. Each student was evaluated individually against his own rate of learning to make sure no one was left behind.

In their 11th year, the students went into a Work Experience Program. The first year prepared them to focus on an area that they might want to get into. Program people talked with them all the time to help them make decisions. In the second year, rather than come to class, they spent their two hours in the hospital where they were assigned to various departments. The second year curriculum consisted of a series of booklets containing tasks for a specific area. The clinical instructors taught these tasks, and as the student learned to perform them, they were checked off in these booklets and dated. Frequency was indicated so that one could check to see if a student was doing the same thing over and over. The coordinator was constantly working with the supervisors to see that there was a variety of tasks provided and that they were being marked off in the booklets.

During their 11th year, the students had ten to twenty hours a week in the hospital and were given ten units of school credit. In their 12th year, the students were in a Cooperative Education Plan. This could mean many things—they could continue on with what they were doing in grade 11 or they could go into an articulation program at the community college. If one wanted to become a pharmacist later on, he might take some of the basic science courses that he needed at the community college while he was a 12th grader and receive high school credit as well as college credit at the same time. Some might want to work part- or full-time and get high school credit, or others might want to go into the nursing program that was already established at their school. There were many different possibilities. The program became more individualized

at the 12th grade level. This was where the teachers and coordinators sat down with each individual student and asked him what he wanted to do. The program was revised at that time to accommodate whatever direction the student wanted to take.

Teaching in the program started with the entire class, then small groups, then individual instruction. A topic would be presented to the whole class, then they would divide up into smaller groups for project work, and from there they would go into individualized instruction with the teacher working with each student.

We wondered how we were going to sell this program outside Los Angeles. We loved it and we thought it was the greatest thing in the world, but who else cared? We approached another school district that was similar (Santa Monica), and they turned us down cold. But the Beverly Hills School District decided that they needed a program of this kind. Why? Because the kids were asking for it. There is a new trend in that affluent community. Students from broken homes are not staying with mother in the mansion but are going out and renting their own apartments. They are on their own and need money to put gas in the car and eat. So the District thought there was no more likely an area to train in than health occupations. They wrote a beautiful proposal and found that they had several thousand dollars of entitlement funds they had never tapped. They were able to get that money this year. We made a presentation to the school board which gave its approval, and they opened their program. It was not as simple as I made it sound. It really takes a lot of work, but it can be done!

EVALUATION OF THE UCLA SECONDARY SCHOOLS PILOT AND DEMONSTRATION PROJECT

Clarence Fielstra, Ph.D.

A very important part of a pilot program surely is that of documenting it, and the UCLA program as you have heard and observed is very well documented. We thoroughly recommend that you do the same with yours if you are getting one under way; document it as you go along.

Another very important part of a pilot program is the planning for evaluating it. That is, determining from the beginning how you are going to judge it and in terms of what criteria. This was the job that I was privileged to be involved in at UCLA. I think there were two or three reasons I was chosen. First, I was not a health educator, and second, I was not a vocational educator; so I was almost totally unrelated to the job at hand. And I suppose another reason might be that I spent a very enjoyable year in 1960 on leave from UCLA for twelve months to study the work experience education program in Santa Barbara City and County. It was undoubtedly the most highly developed work experience education program in California at that time, and the Rosenberg foundation was willing to pay for an evaluation of it. So we studied not only the on-going programs, but we also followed up on all of the students who had gone through it whom we could find.

We were very much impressed with the results of that study. Quite clearly, youngsters who had gone through the work experience education program had advantages all the way through. They actually completed more units of work while in high school. They were more likely to go on to college, believe it or not. They had a higher grade point average in both high school and college. When they got a job, the jobs were more closely related to their vocational aptitudes and interests, and their incomes were higher. To me this was very revealing and very impressive, and I'm more than ever convinced that the close relationship of education in school and the world of work makes great sense. I guess it has from the beginning of time, but we haven't been willing to concede it fully enough. Maybe now we can.

For the evaluation of the UCLA secondary schools program I was assisted nobly and fully by a young lady whose name is Barbara Rosenquist, now Barbara Rosenquist Chrispin. Barbara collected much of the data and together we did much of the thinking regarding what data we should collect.

First of all, we tried to state as clearly as we could to ourselves for the purpose of our study what our objectives were for the program. Among the objectives we outlined was to have a program that increased interest on the part of youngsters in their curriculum. Was there greater relevance in the curriculum when this component was a part of their experience? Did involvement in this program decrease the dropouts? Did it increase the grade point average of these youngsters? Did it help them progress in some pretty specific ways as far as the allied health occupations are concerned? On that score, the nine behavioral or performance objectives that we identified were: 1) The inductees will tell what the workers do in several of the allied health occupations, become acquainted with the occupations, and be able to describe them; 2) they will make a wiser vocational choice than they might have without being in the program; 3) they will develop

each of the steps necessary to get into an allied health job (How do you get into it? What is the ladder and how do you climb it?); 4) they will demonstrate knowledge of how the health care facilities operate; 5) they will maintain their own health through the help of appropriate health care (and it was quite dramatic to see how much better the youngsters took care of themselves as well as taking care of their families); 6) they will be able to refer family and friends to appropriate health care facilities; 7) they will be able to perform basic skills in the selected health occupations—at least one, possibly two, maybe even three; 8) they will be able to identify and describe the functions of specific equipment used in a health care system (it was fun for the youngsters to use the equipment and to learn how to do it well); and, finally, 9) they will demonstrate behavior appropriate in the world of work, e.g., dependability, good attendance, good personal appearance, and all those behaviors and characteristics that are essential to the world of work. Those were the objectives, and then we had to discover ways or invent ways of collecting data regarding them. We relied on every source we could identify.

We relied very heavily on reactions from youngsters themselves, their opinions, their reactions, their own evaluations, and also on the opinions and reactions of parents. I should say immediately that although the youngsters were enthusiastic as has been specified, especially by Diane Watson, the parents were slightly more so. In the evaluation instruments we gave to both, we found the grading slightly higher by parents than by youngsters, which is very reassuring. Also we relied on evaluations by supervisors with whom the youngsters worked as hospital personnel. So opinion was collected on structured forms of one kind or another which we developed for the purpose. In addition, we used the free responses of the youngsters involved, letting them say what they had to say outside of any structured kind of form.

Whenever we could, we also used tests that had been previously developed, such as a standardized objective test of vocational maturity or health information, and we developed some tests ourselves to get information which was not collected through the use of standardized tests. And then we would have to use the cumulative files, the academic records of the youngsters in the several schools, to find out what their grade point averages were at the beginning and at the end, to find out who dropped out, who transferred, what the attendance was, etc.

From several sources we attempted to collect data that would be related to the objectives of the program so we would be able to see if the output was related to what we had expected when we determined the objectives. I can't possibly go into all of the findings, but you can see them in a volume called *The UCLA's Secondary Schools Pilot and Demonstration Project for an Introduction to Allied Health Careers*, which is a summary evaluative report for 1972-73.

In the evaluation of the nine performance objectives that I enumerated, we found that on a scale of "none," "little," "quite a bit," and "much" all of the objectives were rated by parents, youngsters, and supervisors as having been achieved at a level of "quite a bit" which is the next to the highest rating possible. The one performance in which they made the greatest growth in the course of their being in the project was in the ability to explain steps necessary to enter an allied health job, and, for another, in the ability to make a wise vocational choice. By the end of the first year of the project, we found that almost 80 percent of the youngsters could match occupational titles with descriptions of job functions, which is something, of course, they could not do before they started. Sixty-four percent could demonstrate an understanding of the career ladder; 46 percent could identify occupational clusters. We found that in the having or gaining of health information, these youngsters

compared very favorably with other youngsters who had taken the regular health science course in these various schools. In fact, on the health behavior inventory, the project youngsters scored 16 points higher. In this practical approach to real problems of health, they actually learned more health knowledge and got more health information as measured on a standardized test. We used as our control group 100 youngsters who were not admitted to the program merely because there were not enough openings but who had other characteristics that matched those who were chosen. So we watched both groups of 100—the 100 who were admitted and the 100 who were like them but not admitted—and then compared them in various ways. We also found that on the vocational maturity test (the John Crites vocational inventory, a standardized test), the youngsters in the program grew significantly more, statistically, than did those who were in the control group. So vocational maturity is one of the goals that is achieved—the increasing of vocational maturity as a result of this program.

Hospital supervisors' ratings of seven behavioral characteristics of students during phase two—the second year of the program—indicated that between the end of the first semester and the end of that year, students had improved in each one of the characteristics. The behavioral characteristics of students which were rated lowest by the hospital supervisors during phase two were attendance and dependability. I think the nature of the group would tend to account for this. Behavioral characteristics for the students which rated highest, i.e., above average or high average, by hospital supervisors during that second year were these: relations with others, appearance, and job competence. These characteristics improved so much that these youngsters were employable by the time they had completed even their second year of the program and surely by the time they had completed the third.

As for the grade point averages of the students who participated in the program as compared with the 100 who did not participate but who were just like them in as many ways as we could determine, the grade point averages were not very different. But over the two-year period, this is what happened. The youngsters in the program during the two years had their grade point average increase from 2.4 to 2.5. Now when you can go from grade nine to grade 11 and increase your grade point average even by a tenth of a grade point, that's not bad, because the tendency on the part of the particular group we were serving was to drop out or to drop off or to coast until they did drop out. But there was actually an increase. So I think the increase is more significant than one tenth of a grade point would indicate. The youngsters who were not in the program, the control group, had a slight drop from 2.5 in 1970 to 2.3 in 1972. They dropped two tenths of a grade point. So the one tended to increase and the other tended to decrease over that two-year period.

A little more dramatic is this next finding. The percentage of students in the program who dropped out of school during the first two years of the project was only 2.6 percent and the percentage of the control group who dropped was 8.9 percent. However, we ran into a problem when we tried to determine the percentage of students in the program who transferred to another school district during the first two years. When a youngster left school, there was a hesitancy to say he dropped out; there was a preference to say he moved elsewhere, i.e., he transferred. And often it was difficult to know what had happened to him, but he wasn't there. So we were strongly suspicious that many of the transferred were, in reality, drops. Anyway, we found that the youngsters in the program who "transferred" to another school during the first two years was 16 percent and the percentage of students in the control group who transferred to another school during the same period was 34 percent. So if you add these figures to the dropout figures, you find that 19 percent of the students in the project either

dropped out or transferred and 44 percent of the youngsters who were not in the program either transferred or dropped out.

I would like to conclude with some quotations by the youngsters themselves who went through the program. This first one is from a youngster who really was affected by her experience. She said, "I'm working in the Intercommunity Education Children's Home and I've found it to be very rewarding and a beautiful experience. Probably I am learning just as much as the children. I have learned to love other people who are like me and have become more responsible for myself and others around me. I have learned understanding and compassion for retarded children. Many times I reach out to them as much as they do to me. No words can explain the fulfillment and joy that comes from seeing these children learn; to watch the children get off the bus and run to you and hug you and kiss you is pure love. For a child to trust you and to believe in you and to return your love is fantastic. To be a part of this and to learn how to cope with and handle these children is an unbelievable experience for me." This is a youngster in high school speaking. Isn't it great?

Many parents said that their children blossomed out as a result of being in this program, and that, for the first time, they talked about school, they talked about life, and they even began to respect their parents a little bit as people who might be interesting, worth knowing, and with whom they might have a comradeship and an affectionate relationship.

Here is what another youngster said: "My experience in the hospital is helping me to have more confidence in myself. As far as my goals are concerned, it has helped me a great deal—especially with my personality, grooming, working with others and learning to keep some things to myself."

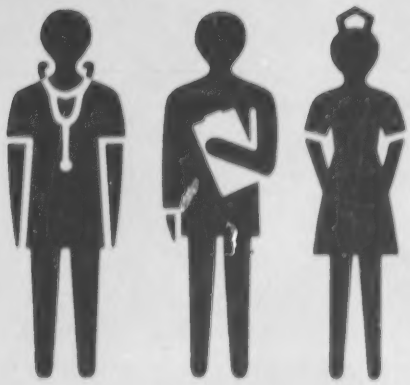
Another student said, "I have a clearer picture of what it is like in the vocational field I have chosen. My job now has helped me to make up my mind as to whether or not I really want to pursue this field. It has also given me an idea as to what other jobs similar to the one I chose would be like."

At the end of the whole three-year experience, we had a collective conference. Some of the quotations that came from the conference follow. One person said, "The program has meant a great deal to me. It has provided summer employment so I wouldn't have to run the streets during the summer. But most of all it has opened up what working in a hospital is all about. It has helped me a lot. I now have a job at a hospital during the week and Saturday developing X-rays, and someday I hope to become an X-ray technician. I hope that the program continues so that it can help others, too."

And another one said, "The allied health program has been a big help to me. I have gained the necessary experience I will need to enter the profession I have chosen. It has exposed me to the different vocations available in the medical field and in hospitals in general which enabled me to decide on my occupational objectives. Allied health has also helped me in my home. I learned a lot about symptoms for different illnesses which enabled me to take care of myself and family."

One last quotation: "While working in this project, I discovered the importance of having a good job. I also found that having my own money to spend helped me a great deal. I hope this program will continue, and I feel that students that go into it should go into it with their minds set on succeeding, not jiving."

These are just a few of the highlights of the evaluation. I hope that you might be inspired to look at the rest of it properly but particularly to look at the program guide, the teacher's manuals, and the other volumes to which I have referred. I think those manuals are probably among the most important developments of the entire program.



recommendations

TEACHER SELECTION CRITERIA

Recommendations

1 Teachers should be selected on the basis of some predictor of success as a teacher: how well do the students or graduates perform in the role for which the teacher is preparing them?

2 Be aware of results of research on teacher effectiveness. Is the person open minded? Does he seek new challenges? Is he aware of current trends? Does he have in-depth knowledge of his own field? Is he able to utilize evaluation techniques effectively?

3 Identify the local constraints and policies effecting teacher selection.

4 Develop and make explicit the assumptions which underlie the operations of a specified health occupations program. For example, work experience as a deliverer of health care combined with educational preparation constitutes sufficient background for teaching, is an assumption which will influence the selection of teachers.

5 Consider attributes desired which are not necessarily learned in a formal program, i.e., attributes which are learned through a lifetime of living. What must the person bring with him to the teaching position?

GROUP DISCUSSION LEADER: *Mary Elizabeth Milliken, Ed.D.*

We might start by admitting that in many situations where a teacher is being sought for a position, selection really does not take place at all. The individual is employed on the basis of availability—that is pretty much the only criterion. And yet we would all recognize that this is not the way it should be; teachers should be selected on the basis of some predictor of success as a teacher.

Let us deal with the ultimate criterion of effective teaching: how a teacher's students or graduates perform at some future date in the role for which that teacher presumably was preparing them. Now, you may say that is a whole lot different from selecting the teacher and we should proceed on some other basis. But I would like to suggest that the criteria related to teacher selection can be found by examining the performances of graduates of programs which manifested differing characteristics; or that, even if we cannot derive specific criteria, we at least should keep in mind that what we are really concerned with is how well the graduates of this teacher's program will function according to the purpose of the program.

I frequently see manifestations of indifference or lack of awareness of this ultimate criterion. For example, a teacher in the practical nursing program recently said to me, "I want you to know that over 50 percent of our graduates have gone on to professional nursing schools." And she stood there waiting for me to praise this accomplishment. It shook her up a bit when I said, "Is the mission of your practical nursing program to recruit students for professional nursing programs? Did they spend a year in your program to get ready to go on to professional nursing programs?" She sputtered for a few minutes and I continued, "You know, I would rather hear you talk about how many of your graduates have accepted positions as practical nurses, have participated in continuing education programs to extend their competencies as practical nurses, and are actually delivering those health services which we classify as functions of practical nurses. If this is not the way your graduates are performing, something is wrong with your program. Or maybe it isn't your program that is out of kilter; perhaps it is your selection procedures."

As we explored their selection procedures, it turned out that they did give a pre-selection test which yielded an IQ score, and they were accepting no one with an IQ of less than 110. I would say this person is not functioning effectively as a teacher of practical nurses. She really ought to be on the faculty of a professional nursing program because of her own values.

There are many articles being published about effective teaching and much of what is being printed is based on sound research. We are finally beginning to come to grips with what differentiates effective teaching from ineffective teaching. As you examine the results of such research, you will again identify some criteria that can be used to select a teacher.

About eighteen months ago I heard a statement concerning a person who is very well known in allied health and also in teacher education, who said that a particular test could absolutely select those who could teach. Now, this worries me because this was a person in a leadership position, but her statement tells me that she does not understand the standarized test or how to use it. It also tells me that she does not understand the importance of professional judgments which take into account many variables rather than a single variable. Please, whatever criteria you establish,

do not select a standardized test and say, "This will make my decision for me." That is a total cop-out on this matter of selecting teachers according to some explicit criteria.

When selecting teachers for health occupations, we are asking someone to give up practicing as a health practitioner and assume the functions of a teacher. This person is apt to relate to what has previously been his area of practice as a teaching field in which to prepare others to function as practitioners. And when you ask a health professional to make this career change—a major change in his or her own career development path—you are really asking him to do something that is going to be a traumatic experience for the first year with many of them not even surviving that first year and going back to health practice after deciding that they cannot adapt to the constraints of the educational system.

To help prevent such disenchantment with teaching, selection criteria should be employed. Identify the local constraints and policies effecting teacher selection. Determine the level of the program in which the teacher will function. Will he be teaching in a middle school career-oriented program, a high school program combining career components and job skills, or a post secondary program? Are the learners disadvantaged, middle class, or minorities? Is the program self-paced or is a rigid curriculum to be followed? Is teacher creativity encouraged or discouraged? The answers to these questions will aid in selecting teachers who have greater potential for success.

I would like to suggest one approach which is a skull-cracking kind of experience; it is slow and developmental, but it does lead to the ability to make explicit some criteria you could use in your situation to select teachers. Of course, when we talk about teachers of health occupations education, we are talking about people who must conform to societal institutions, for the health field is a major societal institution.

The approach that will permit deriving some specific criteria appropriate to your local situation is to develop and make explicit the assumptions which underlie the operations of your health occupations program. I have pulled a number of assumptions from a publication which is now in press in which an entire chapter is devoted to assumptions. An assumption, as I am using it here, can be either a statement of fact, an hypothesis, or any statement of a belief or commitment. If it is a statement of fact, it can be documented with evidence to support it. If it is an hypothesis, it is thought to be true and is something that can be tested to determine its validity. If it is a statement of belief, it is recognized as a personal thing and there would be those who would accept it and those who would not.

Many school people assume that any credentialled health practitioner has an adequate grasp of his particular field and thus can teach it. If you accept this assumption, then credentialling as a health person is one of the criteria you would use in selecting a teacher. If you reject this assumption, then, of course, that would mean a different criterion should be selected. Those of you who are vocational educators will immediately recognize this assumption as a basic tenet of vocational education—that both educational preparation and work experience should enter into the preparation of an individual for teaching in an occupational program.

This particular assumption, whether it is explicit or not, is used for selection of teachers in vocational education. I would suggest that at the professional level, this criterion is violated frequently. Often, a brand new graduate of a program is put on the faculty as a new teacher without ever testing and validating the content

of that preparatory program in the real world of work. I feel that work experience as a deliverer of health services, combined with preparation as a health educator, constitutes sufficient background for teaching.

There are numerous other assumptions which can be explored. As you put down on paper some thoughts you have about health occupations education, examine them and say, "Well, do we or do we not believe this?" From this basic assumption underlying the program, you can derive those criteria which will help you select a teacher.

Ultimately, the questions must be: What should the person bring to the teaching position initially? What should the person possess as personal attributes and as results of past experiences? What should we consider that the teacher education program will help this person develop? If you are going to provide pre-service education in your criteria, you must consider what might be gained by the individual through the pre-service program. If there is no pre-service program, then you are going to look for these capabilities to be present already in the person applying for the position.

CONTENT FOR THE HEALTH OCCUPATIONS EDUCATION BASIC TEACHING DEGREE

Recommendations

1 Determine the competencies and abilities needed to teach successfully, and provide information and practice to develop these competencies and abilities to a level of mastery.

2 Determine the selection criteria for people who will be admitted to the teaching degree process.

   a. What is their potential?
   b. What are your constraints, i.e., time, resources, and audio-visual aids available; how motivated people are; etc.?
   c. What characteristics are desirable in teachers?

3 The content of a teacher education program should focus on *process*, i.e., methods as opposed to subject matter.

   a. Provide basic courses in methods of writing and utilizing meaningful, measurable objectives.
   b. Provide training in evaluation techniques and procedures to include the proper uses of evaluation.
   c. Provide leadership and problem-solving training.
   d. Provide training in inter-personal relationships.

4 Upgrade the status and recognition of persons in Health Occupations Education.

   a. Allow individuals to do self-evaluations of their own strengths and weaknesses.
   b. Assist in evaluating the situations in which they may provide leadership in their particular roles.
   c. Allow them freedom to develop a style of operations that is consistent with their own characteristics and with reference to their work.

5 Persons who complete the required training should be given a degree title consistent with their actual job, e.g., Allied Health Education Administration or Allied Health Teacher Preparation.

6 Maintain continuing education to keep teachers informed of current trends and new developments.

a. Provide mini-course, in-service programs for specific problem areas in lieu of some university-based education courses.
b. Allow credit for recent documented employment experience.

GROUP DISCUSSION LEADER: *Robert M. Tomlinson, Ph.D.*

When discussing the health occupations education teaching degree, it is necessary to define the role of health care personnel based on developed task analyses in order to more clearly define the role of the teacher of these health care personnel. We must also determine whether we want an administrator, a teacher educator, or a teacher preparing practitioners in a specialty field. Each of these roles requires a different set of competencies and a different set of activities, so it is important to determine the competencies and performances expected of the individual receiving the training.

There is also selection criteria to be dealt with. Selection criteria focuses on who is going to enter the process, what you are going to be able to do with them, and what your constraints are, e.g., how much time you will have, how many resources, what type of people, what kind of motivation, and what audio-visual aids are available. It helps to define who the individual is and what characteristics he should possess. Certainly, the best you can do is such that in some future time of decision, the person who completes the process will make a better quality decision under a certain set of circumstances than they would have made had you not had contact with them in this process.

You cannot give a lot of rules for making decisions because there is no way anyone can remember all those rules. Situations come up too fast and the person has to be able to select the solution that best suits each situation. It has to be something that is a part of the individual. Essentially that means they are going to make decisions on the basis of principles and generalizations, which takes you right back to the basic philosophies that must become a part of each person.

Within the overall structure, too often we think of content as an organized body of knowledge. The most important content in a health practitioner preparation program or in a teacher education program, whether it be for health or another area, is process as content. That really means that you teach more of *how* to do things. We can teach all the rules and content of psychology, for example, but that does not mean the student can actually help someone solve his problems.

We recently had a workshop on the problem-solving approach, i.e., how you get people to have that approach as a part of their way of doing things and how this could be integrated and utilized throughout a curriculum. At the end of two days, one person sitting in the back row said, "OK, you have finally convinced me that problem solving is a competency; it is a unit we should have in our curriculum. Now, should that course in problem solving come before or after?" Obviously, he had not heard what we really said.

People in the health field have to think of their fellow workers as people. Do you choose the word "we" or "they" when you refer to some group? So many times health practitioners come to me with all the principles of the integrity of the individual, their rights to privacy, rights to respect, and rights to be treated as an individual. They apply that more or less to their own role and totally violate it in the way they choose their words in referring to "that stupid aide," "a monkey could do that job," and they take away all the dignity and respect by the way they speak.

The role of sociological structuring is important in asking a practitioner to become a teacher and give up all the status and security

he has gained from being a recognized practitioner. He steps into the educational area at the bottom of the ladder in status and competence because he is now competing in somebody else's field. Many people cannot ever really overcome the trauma; it is a tough job stepover to make.

Along this line there is the distinction between leadership capabilities and someone in a leadership position in an organizational structure. They are totally independent concepts. Hopefully, the person you have as supervisor or administrator also has leadership ability. But they don't necessarily, because an administrative role takes its power and authority from the organization. Leadership is the influence a person can exert on a group in helping that group meet some need that it has. An individual teacher can do this, and he often has to in this field where we deal with small groups and inter-personal relationships.

We can give some of the status, recognition, and relationships to individuals by getting these kinds of concepts across and letting them do some self-evaluations of their own strengths and weaknesses. We should also provide some assistance in evaluating the situations in which they may provide leadership in their particular role so that they can have a style of operations that is consistent with their own characteristics and with reference to their work. In addition, they should be given a degree title which states clearly the actual job they will be doing. Rather than simply receiving a teaching credential, they can gain status in knowing that their degree title accurately reflects the function they perform, e.g., Allied Health Teacher Preparation.

After initial certification requirements have been met, there should be provisions for continuing education for health occupations education teachers. This education could consist of in-service workshops, university courses, or mini-courses offered on specific topics in lieu of some university courses.

These are all considerations with which we must be concerned in determining the content for the Health Occupations Education basic teaching degree.

PREPARATION FOR LEADERSHIP ROLES IN HEALTH OCCUPATIONS EDUCATION

Recommendations

1 Leaders in health occupations education should possess specific skills, knowledge, and abilities directly related to health care and the principles of vocational-technical education.

2 Leadership training and teacher education personnel should work together in identifying and developing potential leaders in health occupations education.

3 People who possess some of the basic leadership characteristics should be encouraged to develop all of the skills and competencies needed to be effective leaders.

4 The experiences offered potential leaders should be purposely planned, meaningful, and challenging.

5 Accept and utilize all the competencies of potential leaders that have been gained from all sources, e.g., occupational experience, alliance with professional organizations, participation in workshops, etc.

GROUP DISCUSSION LEADER: *Elizabeth E. Kerr, Ed.D.*

I would like to share with you those characteristics that I believe to be basic to effective leadership in general. These characteristics include fairness, objectivity, honesty, sincerity, forthrightness, the ability to effect positive inter-personal relationships and attempt to bring out the best in people, the ability to work with groups of people having either common or diverse interests or goals, strength of convictions and preparedness to justify one's position yet have the ability to compromise or even yield if necessary and appropriate, the ability to recognize and learn from mistakes, the ability and readiness to speak before groups, the ability to be creative and innovative—to develop a climate conducive to enabling people to further develop and use their expertise, and the willingness and ability to delegate responsibility and accept and fulfill the role as a change agent. And I have added one more—effective leaders must possess self-confidence. There are others, I am sure, that you could think of, but those are the basic things I wanted to share with you for leadership in any field.

Let us look for a moment at additional characteristics that are needed for effective leadership in health occupations education. A leader in this field must be familiar with the total educational system and the role of vocational education within it; have a commitment to the philosophy and goals of vocational and technical education; where required or appropriate, have achieved competence in a health profession and all the necessary credentials as required by that profession or group; be somewhat familiar with various health professions; possess skills in curriculum development, instructional processes, and counselling; identify and work with health professional associations and agencies which set standards for educational professionalism; be alert to community health care needs, and identify and use community resources to help meet these needs; be familiar with the needs of and the current and new developments in the health care delivery system; be familiar with existing and potential state and national legislation that effects or has implications for the field of education in general, vocational education, and government. And I would add another characteristic—the ability to prepare and administer budgets.

As we look at these basic characteristics of leadership that are needed, we find ourselves asking, "How are they gained?" I think too often we assume that the development of these basic personal characteristics or the attainment of these competencies can be gained only at the graduate level of education. If we look at the experiences that contribute to our whole self as a person, I think we would have to recognize them as having an input, too. We would have to look at our common educational experiences, our church activities, our social experiences, employment situations, community activities, professional associations, continuing education, and military service. There are many, many settings in which you can gain these characteristics and competencies. Therefore, I believe it is imperative to recognize that these kinds of attributes can be gained in a variety of settings and that we do not require re-learning or going through hoops a second time merely to meet requirements of a specific curriculum. Hopefully, we are gaining in this area, but I think we still have a long way to go in accepting those competencies achieved in settings other than educational institutions.

If we look for the sources of leadership competencies, then we must also look at the roles different people or groups play. First, we

should look at the role of the learner. It is important that the learner be interested, motivated, and challenged. It is our role, as I see it, to help this individual become motivated and challenged in the right directions. Then there is the role of the educational institution which plays an informal part through workshops, seminars, and conferences made available to people seeking these kinds of competencies.

The experiences offered, whether they be by an educational institution, a health professional, an employment agency, or whatever, need to be purposely planned, meaningful, and challenging so that the diseases threatening the vitality of leadership can be prevented.

Let me tell you what some of these diseases are. There is feverish nearsightedness, novaphobia (the illogical fear of the new), antiquaphobia (the illogical fear of the old), cerebralattacknia (the inability to get the wheels going), marrowmalasia (the softening of nerves or lack of backbone), hydroaesthesia (decreased sensibility), and hyperaesthesia (excessive sensibility). These are the kinds of things we have to prevent if we are to have strong leadership in the field.

I want to give you an example of what I am talking about. Ida Kent came to us in our area with our first program in dental assisting. She had no education beyond high school, but she had had experience working in a dental office. She came to us with many of the attributes I have been talking about which had been gained outside of formal education. She set up our first dental assisting program in the state and she also helped others get started. We now have seven such programs. Ms. Kent is very active nationally and holds a national office in service and consulting. She will soon be finishing her baccalaureate degree, but without her help we would not have gotten our program going as effectively as we did. By the same token, we have a person on campus who has a Ph.D. in higher education and if we let him he will be an obstruction to what we want to do.

What I am saying is that leadership ability is not all gained from higher education. It is derived from our daily experiences throughout our lives, and we should be willing to overlook the lack of formal education in persons who have attained the basic leadership characteristics and competencies through personal experiences.

CERTIFICATION STANDARDS FOR PERSONNEL IN HEALTH OCCUPATIONS EDUCATION

Recommendations

1 Consideration should be given to an applicant's work experience when determining his qualifications.

2 Certification standards should include a professional education component which consists of a general education or liberal arts component when certification is obtained in conjunction with a university degree, i.e., degree requirements.

3 Certification standards should include a minimum of preparation in a health specialty to assure in-depth knowledge of the health care delivery system.

4 Certification requirements should be made flexible to accommodate individual differences in background, preparation, and needs.

5 Certification programs should be offered at a variety of institutions to include community colleges, intermediate and unified school district education programs, and the Department of Public Instruction.

6 Provisions should be made for continuing certification to include further course work beyond the initial certification; attendance at professional meetings, workshops, and in-service seminars; and work experience.

7 Teachers and future teachers should be surveyed to maintain a current assessment of their needs in relation to certification requirements.

GROUP DISCUSSION LEADER: *Chester S. Rzonca, Ph.D.*

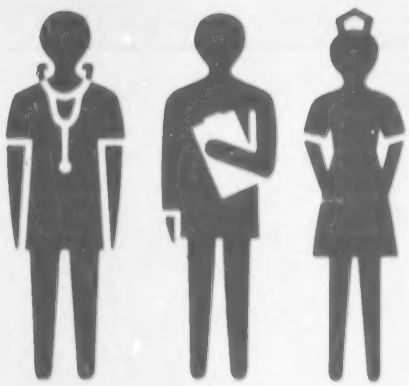
What should the certification program for personnel in health occupations education contain? There should be a work experience component, a professional education component, and, in terms of relating this to a university degree (if that is desired, though it is not essential), you need a general education or liberal arts component. It has also been found helpful for the allied health teacher to have a health specialty preparation. Lastly, perhaps one of the conditions ought to be that people are not excluded because of certification requirements without looking at some of the experiences they have had in the past.

A factor that needs to be considered when looking at certification for health occupations education is the inflexibility of current certification requirements. Typically, requirements are spelled out as a certain number of courses that all people have to take. They are the same for everyone regardless of previous background even if the person has taught for several years or has experience as an in-service director in a hospital. In our quest to provide a uniform standard, we try to enforce a specific type of levy whether it be degree related or not. Certification requirements for health occupations education should be more flexible.

We tend to make some assumptions based on current certification programs. One assumption is that the universities are primarily responsible for providing the educational certification component. However, intermediate school districts, community colleges, and the Department of Public Instruction provide the means for limiting the role of the university in terms of being the save-all for certification requirements. The role is an important one in terms of the amount of people that need basic certification services, but we need to look to other levels of education to provide these services.

One of the things that we fail to consider in certification is the difference between initial certification and continuing certification. Certification brings people up to a certain level. After that, there ought to be some way for people to maintain that certificate. Our current procedure is to bring them up to a specified level through education courses and then maintain that certificate through additional education courses. Actually, course work is only one of the ways to maintain an education certificate. Professional meetings conducted by professional associations also should help people maintain their certificate. While work experience is important for an entry level credential, it is also important in maintaining a credential over a period of years. Additionally, in terms of continuing certification, we have neglected the role of peers and administrators in determining how good a job the people do.

Another factor that is neglected is the role of the teacher in terms of how certification requirements are established. Have you ever talked to people when they got through with a university program? They are not concerned with how the certification programs were established; their first question concerns how they are going to meet the requirements for the credential. We should talk to these people to determine what their needs are and what kinds of things they feel they should have in order to function in the classroom.



appendixes

FINAL EVALUATION OF THE HEALTH OCCUPATIONS EDUCATION CONFERENCE

■

The main objectives of the Health Occupations Education (HOE) conference were twofold: (1) To familiarize HOE personnel with the materials produced by the Allied Health Professions Project (AHPP) at the University of California, Los Angeles, and to assist personnel in achieving a level of mastery in their use; (2) To disseminate nationwide the AHPP materials through conference participants. These HOE conference goals were achieved as described in the following paragraphs.

■

In order to ascertain the effectiveness of the HOE conference, an evaluation was conducted six months later by means of a survey questionnaire sent to all participants; 65 percent of the conferees responded. Of these respondents, 71 percent felt that the objectives were adequately met. There was sufficient time allowed to familiarize everyone with the AHPP materials and, in turn, each participant could subsequently instruct others.

AHPP materials were disseminated by all participants responding to the survey. A conference was the most popular method, used by 43 percent of the respondents. Twenty-five percent used workshops to disseminate the materials, and nine percent conducted seminars. Individuals also utilized faculty meetings, supervisory and consultant visits, personal conversations and discussions, and inservice training. In addition, the materials have benefitted respondents by serving as a resource for curriculum development, revision of occupational task requirements, and writing objectives. Several participants have displayed them at conferences. Others are using the materials to initiate changes, as a guide for determining levels of competency, as a counseling tool, and as background for research. The materials have been modified where necessary to meet the needs of the specific programs.

For many participants the most useful aspect of the conference was the interaction with other professionals in HOE and the oppor-

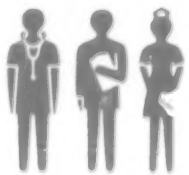
tunities provided to exchange ideas, information, and perspectives. The second most useful aspect concerned the UCLA AHPP and the materials produced by the project. Participants approved of the time allowed to study the displays and were particularly grateful for the descriptions of their use. Specific comments focused on the Secondary Schools Program and on the concepts of core curriculum and career mobility. Also ranking high in usefulness were the group discussions and the fact that a good exchange of ideas was possible.

Some of the additional remarks made by conference participants are stated below.

> "The concept involved is not difficult but the implementation is. How about some follow-up conferences and materials?"
>
> "The information generated from one of the group sessions has facilitated the approval of the position of State Supervisor in HOE in South Dakota. This one outcome made the entire conference worthwhile."
>
> "Our teachers are happy to see materials of such quality at prices they can afford."
>
> "The outcome, I feel, was that the government wants leadership in health decisions. It is up to us to provide that leadership."

■

Based on the survey questionnaire, the HOE conference achieved its objectives. Nearly three-quarters of the respondents indicated adequate familiarization with the AHPP materials and sufficient mastery of their content to enable instruction of others. Dissemination of the materials by conferees has been widespread and varied, indicating a national impact of tremendous scope.



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